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General

R. W. Gilpin
JL ST CO



MANUFACTURES OF
THE
GENERAL
INCANDESCENT
ARC LIGHT CO
NEW YORK.



CATALOGUE
No. 11



1897



Dis- 33 7 1/3 %

CATALOGUE No. 11.

THE LATEST
BERGMANN

R. W. Gilpin
Jl. 31' 00

ARC LAMPS
SWITCHES
SWITCH BOARDS
PANEL BOARDS
OUTLET BOXES
ETC., ETC.



MANUFACTURED BY THE

GENERAL INCANDESCENT ARC LIGHT COMPANY,
S. BERGMANN, President,

572 to 578 FIRST AVENUE,
CORNER 33d STREET,
NEW YORK.

Also Sole Agents for the

CELEBRATED "SUN-SCHMELZER-NUREMBERG" CARBONS.

572-578 First Avenue, Cor. 33d Street,
New York, May, 1897.

Important Notice



THIS, our Catalogue No. 11, contains under one cover the Prices, Illustrations, Etc., of our various products, such as Arc Lamps, Carbons, Switches, Switch Boards, Panel Boards, Outlet Boxes, etc., which have heretofore been published by us in separate pamphlets and circulars. * * * * *

For the sake of uniformity

All previous lists have been remodeled so that one discount might apply (as far as possible) to all the printed prices. * * * * *

Therefore

All previously printed lists and quoted discounts are hereby canceled and new discounts will be quoted on application. * * * * *

With thanks for past favors and soliciting their continuance, we are,

Very respectfully,

GENERAL INCANDESCENT ARC LIGHT CO.

TELEPHONE,
1309 38th.

S. BERGMANN, President.

The Bergmann Arc Lamps



FOR Constant Potential Circuits have been and are to-day the recognized leaders in this field of Electric Lighting. There are more of them in use than of any other style or manufacture, and the demand for them shows a constant increase in their popularity, as our sales testify. * * * * *

In addition to our celebrated Open Arc Lamps we have devised and perfected

The Bergmann Enclosed Arc Lamp

for constant potential circuits, protected by American and foreign patents. We illustrate both kinds of Lamps in this catalogue with prices and other particulars. * * * * *

The standard of excellence in Workmanship, Simplicity of Mechanism, Ease and Economy of Maintenance and Beauty of Design and Finish for which our Arc Lamps have become so well known, have been well sustained and we guarantee them to purchasers to be in all respects,

The Best in the Market

while our prices are the lowest. * * * * *

Send for Discounts.

The Bergmann Long Life Arc Lamps

FOR CONSTANT POTENTIAL DIRECT CURRENT CIRCUITS.

BURN from 100 to 150 hours with one set of carbons, and operate with a potential of about 80 volts across the arc. They are provided with a resistance mounted on the lamp and are to be connected in multiple on circuits of 100 to 120 volts, provision being made in the resistance for this range of variation in voltage.* ♣ ♣ ♣ ♣ ♣

The advantages of these lamps are numerous, such as:

Economy There is an average saving in the items of carbons and trimming of from $\frac{1}{3}$ to $\frac{1}{2}$ the cost of the lamps themselves every year. ♣ ♣ ♣ ♣ ♣

Safety The construction of the lamp is such that all risk of fire from the burning carbon is absolutely done away with. ♣ ♣ ♣ ♣ ♣ ♣ ♣

Cleanliness No carbon dust can get into the air and over the goods. ♣ ♣ ♣ ♣ ♣ ♣ ♣

Steadiness The light is absolutely steady. ♣ ♣ ♣

Control Each lamp is separately controllable. ♣ ♣

Light The light is evenly diffused and casts no shadows. ♣ ♣ ♣ ♣ ♣ ♣ ♣ ♣

Current Consumption The current consumed at all times remains practically the same, whether at the striking of the arc, at feeding, or between. ♣ ♣ ♣

*N. B.—For circuits of 200 to 240 volts, they can be connected two in series; for circuits of 500 to 600 volts, five in series. A special winding, however, is required for two in series for which we make an additional charge of \$3.25, and a special winding and cut-out for three or more in series for which we make an additional charge of \$4.00.

While we can furnish any special designs in Ornamental Arc Lamps on application, the design No. 2845, illustrated hereon, is our

Standard Brass Long Life Arc Lamp

For Indoor Use.

Price, complete, \$25.00.

Life, 100 to 150 hours.

Length, 38 inches.

Finish, Bright Brass.

Standard amperage, 5.

Size of upper carbon, . . . 12 x $\frac{1}{16}$ in. solid.

Size of lower carbon, . . . 5 x $\frac{1}{16}$ in. solid.

Outer oval globe, alabaster (opal or clear glass if so ordered.)

Inner bulb, alabaster (or clear glass if so ordered.)

For high ceilings we can furnish brass extension rods and canopies at moderate prices. See page 19.

Discount _____ per cent.

Hints to Purchasers.

Globes should be either of alabaster, opal or clear glass. For outdoor lighting, clear globes are recommended, as they permit more light to pass through, and by having the inner bulb of alabaster, the increased light is obtained without objectionable glare. The same selection should be made for warehouse, factory and similar uses. For other indoor lighting, such as stores, offices, lobbies and the like, the globe and bulb should both be of alabaster, which diffuses and softens the light.

All orders will be filled with 5 ampere lamps, unless otherwise directed. We can furnish 4 and 6 amperes without additional charge. We can also make the lamp so that the amperage can be varied from 4 to 5½ amperes at any time, for which an additional charge is made of \$3.00.



No. 2845.



No. 2850.

Design No. 2850 illustrates our

Standard Plain Long Life Arc Lamp

For Outdoor or Indoor Use.

* *

Price, complete, \$20.00.

* *

Life, 100-150 hours.
Length, 40 inches.
Finish, Japanned.
Standard amperage, 5.
Size of upper carbon, . . 12 x $\frac{7}{16}$ in.
Size of lower carbon, . . 5 x $\frac{7}{16}$ in.

Outer globe, alabaster (opal or clear glass if so ordered.)

Inner bulb, alabaster (clear glass if so ordered.)

Discount—per cent.

As a rule, we furnish our Long Life Arc Lamps fitted to use $\frac{7}{16}$ inch carbons. If, however, a somewhat longer life than the $\frac{7}{16}$ in. carbons will give, is preferred, we can fit them for the $\frac{1}{2}$ in. carbons at any time. The increase in "life" by using $\frac{1}{2}$ inch instead of $\frac{7}{16}$ inch carbons amounts to about 30 per cent., but the smaller carbon has the advantage of increasing the candle power and improving the light.

In ordering carbons order only upper ones. The remainder of the upper, after one burning, can be cut to proper length to be used as lower carbon for the next trim.

Standard Plain Long Life Arc Lamp

With Reflector.

♦ ♦

This lamp has been designed with particular reference to attaining the best results for Street or Municipal lighting. The feature of the lamp is the large 26-inch reflector above the outer globe, which arrests all upward rays and projects them downward and outward.

♦ ♦

Price, complete, \$22.50.

♦ ♦



No. 2855.

In other respects this lamp is the same as No. 2850, on page 4.

Discount _____ per cent.

Points Regarding Construction and Design.

The mechanism of the Bergmann Long Life Arc Lamp is exceedingly simple, without springs or gear wheels and has the fewest possible number of parts.

The carbon rod can be taken out by the trimmer and wiped off in the hands, which is the only way to properly clean a carbon rod.

On account of our method of lowering the outside globe, the carbons can be accurately aligned or centered.

The outer globe, when in position is firmly held up to the casing, preventing shaking and breakage and absolutely keeping out dust, rain and snow as well as air.

The device we employ to hold the inner bulb clamps metal against metal instead of against glass, and consequently the breakage of inner bulbs in trimming, etc., is reduced to a minimum.

THE BERGMANN

"Unique"
Long Life Arc Lamp.

In this lamp we have preserved every good feature which has made our other Long Life Arc Lamps the best in the market, and have added several important improvements and advantages.

The appearance and style of the lamp have been enhanced (see cut), and without cutting down the hours of burning at all, we have reduced the total length of the lamp to 28 inches over all. On the succeeding page we show this lamp in position for trimming and describe the means by which this **"Unique"** result has been attained, *vis:* a perfect and really "Long Life" lamp, adapted for low ceilings or wherever a small lamp is preferred.



No. 2890.

No. 2890, Price, complete, \$25.00.

Life	100 to 125 hours.
Length	28 inches.
Finish	Bright Brass.
Standard amperage,	5.
Size of upper carbon,	12 x $\frac{7}{16}$ in. solid.
Size of lower carbon,	5 x $\frac{7}{16}$ in. solid.

Outer globe, round, 11 inches in diameter, alabaster (or opal or clear glass if so ordered.)

Inner bulb, alabaster (or clear glass if so ordered.)

For high ceilings we can furnish brass lengthening rods and canopies at moderate prices. See page 19.

Discount——per cent.

For price and particulars of Plain "Unique Lamp" see page 7.

The accompanying cuts show
the Bergmann

"Unique"

Long Life Arc Lamp

extended for trimming and the
simplicity of the method that
has been adopted for accom-
plishing this most important
feature of the maintenance of
any arc lamp.



Fig. 1.

On the preceding page the
"Unique" Lamp is shown as
when trimmed and in use.



Fig. 2.

The outer globe is first let down in the same manner
as in our other Long Life Arc Lamps and is then in the
position shown in Fig. 1.

By a simple movement, effected with one hand, the
inner bulb with the carbons and carbon holder are then
lowered and, as shown in Fig. 2, are in the best possible
position for trimming.

The No. 2890 Lamp has all brass trimmings. We make a plain
lamp of similar outline, with Iron Trimmings, japanned, which is
our No. 2892.

No. 2892. Japanned, Price complete, . . . \$22.00.



No. 2895.
As in Use.

No. 2895 illustrates our

“Unique” Long Life Arc Lamp

WITH OPAL REFLECTOR,
INSTEAD OF GLOBE.

Price, Complete, \$25.00.

Discount _____ per cent.

Life, 100 to 125 hours.
Length, 24 inches.
Finish, Bright Brass.
Standard amperage, 5.
Size of upper carbon, . . 12 x $\frac{7}{16}$ in.
solid.
Size of lower carbon, . . 5 x $\frac{7}{16}$ in.
solid.
Reflector, Opal, 18 inches diameter,
Bulb, alabaster.



No. 2895.
Extended for Trimming.

For price and particulars of “Plain” Japanned Unique Lamp, see page 7.

Regarding the use of Opal Reflectors.

The arrangement illustrated on pages 8 and 9 gives the user the benefit of all the light that radiates from the arc in the bulb, besides shortening the lamp several inches; especially when the amperage is as low as in our Bijou Lamp, it is of great importance to



No. 2870.



No. 2875.

The "Bijou"
Long Life Arc
Lamps

With Opal Reflectors.

No. 2870.

\$25.00

Price, complete,
 (Bright Brass)

\$23.50

Price, complete,
 (Japanned)

No. 2875.

\$25.00

\$23.50

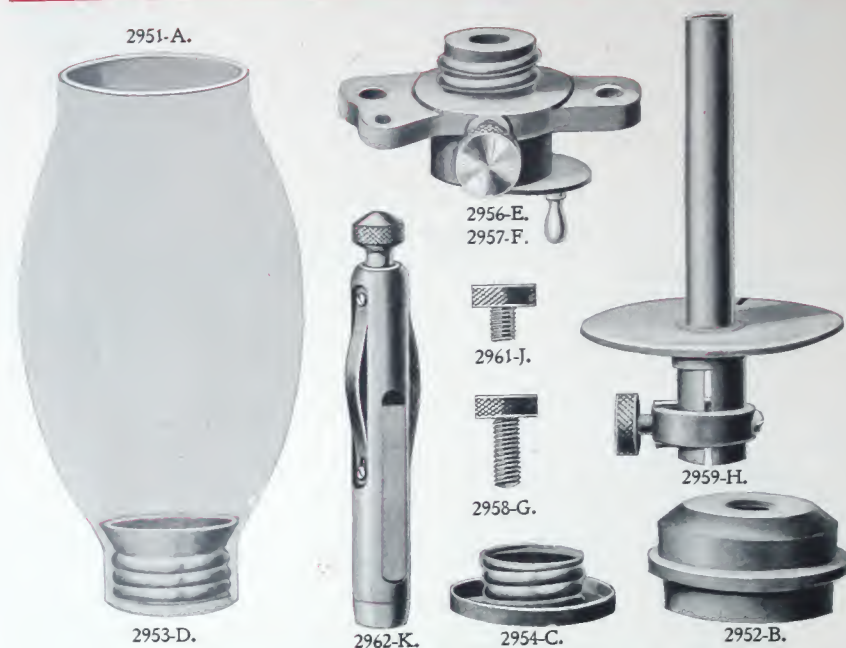
Discount——per cent.

Life, 75 hours
 Length, 27 inches
 Standard amperage, 3
 Diameter of Carbon, $\frac{5}{16}$ inch
 Length of Upper Carbon, 10 inches
 Length of Lower Carbon, 4½ inches
 Reflector, Opal, 16 inches diameter; Bulb, alabaster.

.....

save the amount of light which would be lost through another globe. The reflector is adjustable up or down on the rods, so that it can be set at that position which in actual practice is found to give the best results in every situation.

Extra Parts of our Long Life Arc Lamps.



PRICES OF EXTRA PARTS ILLUSTRATED ABOVE.

2951-A.	Inner Bulb, for lamps Nos. 2845, 2850, 2855, 2890, 2892 and 2895, each, clear,	-\$0.25
	Alabaster,	.30
2952-B.	Check cover for Inner Bulb A, each	.25
2953-C.	Screw to hold Inner Bulb A, male, each	.05
2954-D.	" " " A, female, each	.05
2956-E.	Seat on which parts C, D are screwed to hold Bulb for Lamps Nos. 2845, 2850 and 2855, each	1.20
2957-F.	Seat on which parts C, D are screwed to hold Bulb for Lamps Nos. 2890, 2892 and 2895, each	1.20
2958-G.	Binding Screw for parts E and F, each	.08
2959-H.	1 3/4 inch Carbon Rod, with attached Holder, for Lamps Nos. 2845, 2850 & 2855, each	1.75
2961-J.	Binding Screw for Carbon Holder on H, each	.10
2962-K.	Unique Carbon Holder for Lamps Nos. 2890, 2892 and 2895, each	1.25

N. B. As parts B, E and H are made for both 7-16 and 1/2 inch Carbons and must be bored differently for the one size than the other, care should be taken when ordering these parts to specify the size of carbons used.

PRICES OF GLOBES, HOLDERS, ETC. (NOT ILLUSTRATED ABOVE.)

2963.	Globe Holders for Lamps Nos. 2845, 2850 and 2855, each	-\$0.75
2964.	" " Unique Lamps Nos. 2890, 2892 and 2895, each	.75
2966.	11 inch Round Globes, Clear, 55c.; Opal or Plain Ground, 70c.; Alabaster, each,	.90
2967.	14x12 inch Oval " " 70c.; " " " 85c.; " " "	1.00
2968.	18 inch Opal Reflector for Lamp No. 2895, each	1.75
2969.	16 " " " No. 2870, " "	1.50
2970.	16 " " " No. 2575, " "	1.75

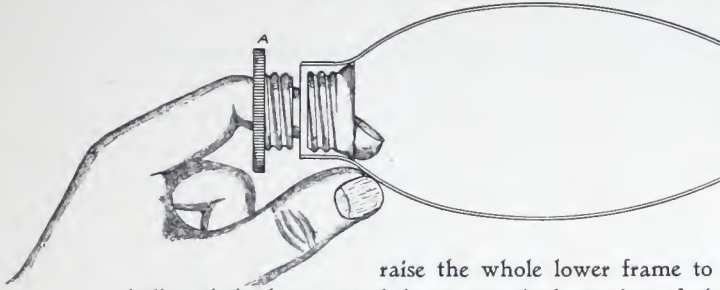
Prices of Globes positively do not include packing, which we charge extra at cost.

Directions for Installing ❧ ❧ ❧

Bergmann Long Life Arc Lamps.

ILLUSTRATED
ON
PRECEDING .
PAGES

Mounting Attach bulb-holder to bulb, as shown in cut, by holding the inner ring with the left forefinger and screwing in part "A" with the right hand. Screw bulb on lamp seat and put on check-cover. Turn sliding cap beneath yoke, pass upper long carbon through yoke, bulb and check-cover,



into upper carbon-holder; then enter lower short carbon in the same way, until its lower end is flush with the yoke. Clamp it and push sliding cap into place. On Unique lamps also

raise the whole lower frame to shorten lamp and screw bulb and check-cover tightly against the base plate of the mechanism by turning the bulb-holder to the right. See that upper carbon is well centered and feeds through check-cover without friction. Unscrew the two nuts and globe-holder from lower end of lamp, fasten globe-holder to the outer globe, and put same on lamp by bringing above parts back into former position. The lower nut is clamped to the stud of the bayonet lock for handling same; the upper one should be used for tightening the globe firmly against the spark-arrester.

Connecting Connect lamps in multiple on 100 to 120 volt direct current circuits. The Positive circuit wire is to be clamped to binding-post P, the Negative wire to N. A reversed connection will consume the lower carbon too fast, and holder and seat are liable to damage. To ascertain if correctly connected, after having burned for a few minutes, switch off, and the upper positive carbon should be considerably hotter than the lower one.

Voltage By cutting in or out some of the resistance at top of lamp, less or more voltage across the arc can be obtained. The best adjustment is about 70 volts across the arc for 100 to 105 volt circuits, 75 volts for 105 to 110 volt circuits, and 80 volts for 110 to 120 volt circuits.

Amperage All lamps are adjusted for the right amount of current before they are shipped. A slight increase in amperes, however, can be obtained by adding weight to the core of the feeding mechanism, or a decrease by removing weight. The amperage is not affected by the resistance, but the voltage is as explained in preceding paragraph.

The Carbon Rod Should be kept bright and clean by using fine emery paper or crocus cloth. It can be entirely taken out in trimming without disturbing the mechanism or removing the shells.

Carbons Must be solid, especially made for long life lamps, if satisfactory service is desired. The remainder of the upper carbon is long enough to be used as a lower carbon for the next trim. For the proper sizes adopted as the standards, see descriptions of lamps. For prices of carbons see page 23.

THIS PAGE IS RESERVED
FOR OUR ✧ ✧ ✧ ✧

NEW LONG LIFE ARC LAMP

FOR ALTERNATING CURRENT CIRCUITS

No. 3000.



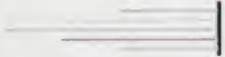
PARTICULARS OF WHICH WERE NOT READY
FOR PUBLICATION WHEN THIS CATALOGUE
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FOR OUR ✧ ✧ ✧ ✧

NEW LONG LIFE ARC LAMP

FOR ALTERNATING CURRENT CIRCUITS

No. 3015.



PARTICULARS OF WHICH WERE NOT READY
FOR PUBLICATION WHEN THIS CATALOGUE
WAS PUT IN THE PRINTER'S HANDS.

The Bergmann Open Arc Lamps

FOR CONSTANT POTENTIAL DIRECT CURRENT CIRCUITS.

BURN with an arc of 40 to 45 volts and are connected singly on 50 to 70 volt circuits, two in series on 100 to 120 volts, four in series on 200 to 240 volts, nine in series on 450 to 500 volts and ten in series on 500 to 550 volts.

The mechanism is of the shunt coil type with rack feed. It is simple and reliable; no springs are used to influence the adjustment, and there are no trains of gear wheels, which after a certain time may fail to work. The trimming is accomplished by lowering the globe, which is supported by chains, and the improved carbon holders are arranged to take any size carbon from $\frac{5}{16}$ up to $\frac{1}{4}$ inch diameter, clamping them always centrally.

These lamps are manufactured in three lengths: "SHORT" or 37 inches for 8 hours of life, "STANDARD" or 45 inches for 11 hours of life, and "LONG" or 53 inches for 14 hours of life (all night); regular amperages are 6, 8 and 10; other amperages to order.

We advise the use of our imported soft cored upper carbons with solid lowers to obtain steadiness and greatest economy of light. We carry in stock all usual sizes of these carbons and can therefore fill orders immediately.

The following sizes of carbons are the standards for our Open Direct Current Lamps:

For 4 Amp. Lamps, $\frac{7}{16}$ inch Cored Upper, $\frac{5}{16}$ inch Solid Lower.

" 6	"	"	"	"	"	"	"	"	"
" 8	"	"	$\frac{9}{16}$	"	"	"	$\frac{7}{16}$	"	"
" 10	"	"	$\frac{11}{16}$	"	"	"	$\frac{1}{2}$	"	"

For 8 Hour Lamps, Uppers are $7\frac{1}{2}$ inches long and Lower 6 inches long.

" 11	"	"	"	"	10	"	"	"	"	$7\frac{1}{2}$	"	"
" 14	"	all night	"	"	12	"	"	"	"	$9\frac{1}{2}$	"	"

For Prices of Direct Current Carbons, see page 23.

Plain Open Arc Lamps.

FOR CONSTANT POTENTIAL
DIRECT CURRENT CIRCUITS.

LENGTHS OVER ALL.

"Short," 8 hour, . . . 37 in.

"Standard," 11 hour, . . 45 in.

"Long," 14 hour, . . . 53 in.

Globes for "Short" and "Standard"
Lamps, round, 12 in.;
for "Long" Lamps, oval,
14 x 12 in.

Alabaster, Regular.

(Opal or Clear Glass to order.)



No. 600.



No. 607.

PRICES.

No. 600. Plain Japanned, complete, \$16.00

No. 607. Plain Japanned, complete, \$17.50

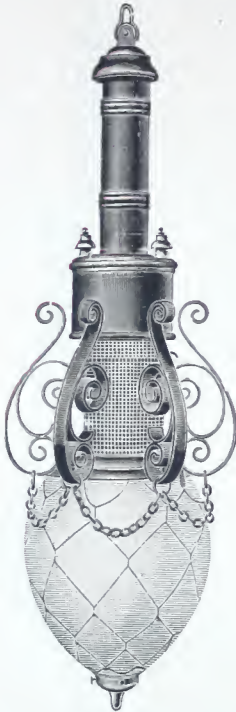
Discount,——per cent.

Lamps Nos. 600 and 607 can be used outdoors without extra hoods, but No. 607 is preferable for such use, as the spark arrester keeps out dust, rain, snow, etc.

When ordering lamps state all the following particulars: Style-Number, Amperes, Voltage of Circuit, Number to be used in Series and Life or Length. When not otherwise directed, we furnish above lamps for 8 Amperes and 115 Volts, two in series, and "Standard" length.

Ornamental Open Arc Lamps.

FOR CONSTANT POTENTIAL DIRECT CURRENT CIRCUITS.



No. 2535



LENGTH OVER ALL:

"STANDARD," 11 hour, 45 in.



Globes, Oval, 14in. x 12in.

Alabaster.

(Regular Opal or Clear Glass
to order.)



No. 838

PRICES.

No. 2535. Ornamental Outdoor (or Indoor), Black, complete . \$25.00

No. 838. Ornamental Indoor Lamp, Bright Brass, complete . 30.00

Discount ____ per cent.

Lamp No. 2535 can be used outdoors without extra hood. Lamp No. 838, when suspended from high ceilings, should be lengthened with brass tubing and extra canopy. We supply such extra lengthening at moderate prices. See page 19.

When ordering lamps state all the following particulars: Style-Number, Amperes, Voltage of Circuit, Number to be used in Series and Life or Length desired. If extra lengthening is ordered, state length.

When not otherwise directed, we furnish above lamps for 8 amperes and 115 volts, two in series and "Standard" length.

The Bergmann Open Arc Lamps

FOR CONSTANT POTENTIAL ALTERNATING
CURRENT CIRCUITS.



BURN with an arc of 30 volts and are connected without a resistance singly on 30 to 33 volt circuits. This pressure can be obtained either by installing a special converter, connected directly to the primary circuit, or by using Economy Coils with existing 100 or 50 volt secondary circuits.

We illustrate two types of Alternating Open Arc Lamps. The one has a rack feed, similar to our direct current open arc lamp, and the other is a chain feed Focusing Lamp. Both mechanisms are constructed on similar principles. They are simple and reliable and have no springs to influence the adjustment. The Rack Feed Lamp is very strong and substantial in construction, therefore well adapted for outdoor lighting. The Focusing Lamp, being shorter and provided with a reflector, which throws all the light down, is preferable for interior lighting.

These Lamp are manufactured in two lengths: "SHORT" for 8 hours of life and "STANDARD" for 12 to 14 hours of life. The "SHORT" Rackfeed Lamp is 41 inches long, the "STANDARD" 49 inches. The "SHORT" Focusing Lamp is 32 inches and the "STANDARD" 36 inches. Amperages are 11 and 15. Other amperages to order.

To secure best results, the upper and lower carbons should be our Imported Soft Cored Alternating Current Carbons. The following sizes of carbons are the standards:

11	Amp.	8	hours.	$\frac{1}{2}$	inch	by	$7\frac{1}{2}$	inches.
11	"	12	"	$\frac{1}{2}$	"	"	$9\frac{1}{2}$	"
15	"	8	"	$\frac{1}{8}$	"	"	$7\frac{1}{2}$	"
15	"	12	"	$\frac{1}{8}$	"	"	$9\frac{1}{2}$	"
15	"	14	"	(all night)	$\frac{5}{8}$	by	$9\frac{1}{2}$	inches.

For Prices of A. C. Carbons, see page 23.

LIST PRICES OF ECONOMY COILS:

For secondary circuits of about 50 volts, supplying 1 or 2 lamps	\$7.50
" " " " " 100 " " " 1, 2 or 3 lamps	7.50

Discount _____ per cent.

Alternating Current Open Arc Lamps.

FOR CONSTANT POTENTIAL CIRCUITS.

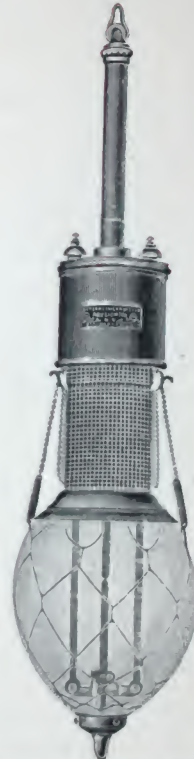
(For Dimensions and Descriptions see page 17.)



No. 2460. Rack feed.



No. 2725.
Focusing, Chain feed.



No. 2425. Rack feed.

PRICES:

No. 2425.	Complete with 14 x 12 inch globe, Japanned,	\$17.50
No. 2725.	" 14 x 12 " "	22.50
No. 2460.	" 14 x 12 " Bright Brass,	30.00

Discount ——— per cent.

Lamps Nos. 2425 and 2725 are for indoor or outdoor use and do not require a hood. Lamp No. 2460 is for indoor use only and, when suspended from high ceilings, should be lengthened with tubing and extra canopy. We supply extra lengthening at moderate prices. See page 19.

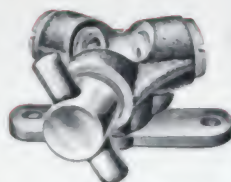
When ordering lamps, state all the following particulars: Style-Number, Finish, Amperes, Voltage of Circuit and Life or Length desired. If extra lengthening is ordered, state length.

Unless otherwise directed, we furnish above lamps for 15 amperes and 30 volts and "Standard" length.

Bergmann Universal Carbon Holders.



No. 2977.



No. 2978.

No. 2977, Upper Carbon Holder for $\frac{3}{8}$ in. Ball, (for Open Arc Lamps) - \$0.75
 No. 2978, Lower Carbon Holder without Joint, (for Open Arc Lamps) - 75

These Carbon Holders take any size carbon from $\frac{5}{16}$ up to $\frac{11}{16}$ inches diameter, clamping the carbons always centrally.



OTHER EXTRA PARTS OF OUR OPEN ARC LAMPS.

2971.	Slip Nets for Globes, each, (In ordering give dimensions of globe)	\$0.50
2972.	Chains for same, per pair,	40
2973.	Ash Pans, each.	25
2974.	Rack Rods (state length), each,	1.25
2975.	Globe (as shown on lamp, 600) Round, 12 in. Diameter, clear, 55c.; Opal or Plain Ground, 70c.; Alabaster,	90
2967.	Globe (as shown on lamps 607, 838, etc.) Oval, 14 x 12 in., clear, 70c.; Opal or Plain Ground, 85c.; Alabaster,	1.00
Prices of Globes positively do not include Packing, which we charge extra at cost.		
2979.	Extra lengthening for Ornamental Lamps, Brass, 1 foot long, including Canopy,	2.00
	Extra lengthening for Ornamental Lamps, additional per foot,	40



No. 155.

HANGER BOARD.

All Metal and Porcelain. Approved by
 Fire Underwriters.

Price, No. 155, Hanger Board. \$1.35

The Hanger Board here shown is non-combustible and made in accordance with the requirements of the Fire Underwriters. Provision is made for connection to the lamp either through the supporting rods or by screw connection through wires.

Bergmann Street Lamp Pole Fixtures.



No. 153.

The Arc Lamp Support or Fixture, No. 153, here illustrated, is strong and substantially made. The side rods are of $1\frac{1}{4}$ inch wrought-iron pipe and the cross pieces are heavy iron castings. The top supporting ring is made to fit our outdoor lamps accurately and provided with screw clamps for steadying the lamp.

The lower socket is made to slip on top of pole, is $5\frac{1}{2}$ inches long and $5\frac{1}{2}$ inches in diameter, inside measurement, with two sets of holes for bolts or pins to go through the pole.

It is Japanned.

The Arc Lamp Support or Fixture, No. 154, here illustrated, is designed to supply a somewhat more ornamental fixture than No. 153. It is built on the same general lines and of the same size. The ornamental scrolls are turned out when trimming the lamp, so that the globe can be lowered.



No. 154.

PRICES.

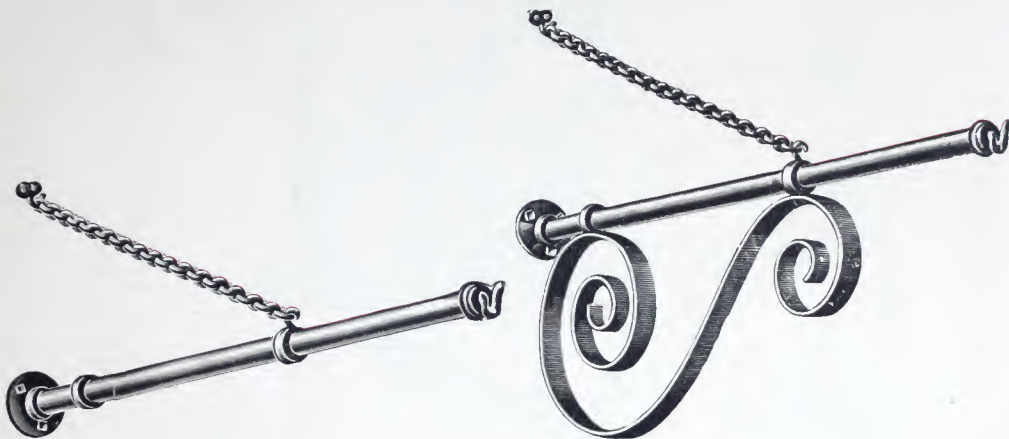
No. 153, Fixture Only,	-	\$7.50.
No. 154, Fixture Only,	-	11.00.

No. 153 is shown with our Standard Open Arc Lamp and No. 154 is shown with our Standard Long Life Arc Lamp, but either fixture will fit either lamp.

Arc Lamp Outrigger and Brackets.



No. 2805.



No. 2558.

No. 2556.

PRICES.

- No. 2805. Plain Japanned Outrigger of $1\frac{1}{4}$ inch gas pipe, with eyes on lamp hook for guy wires; 6 feet long (or less to order) \$2.50
- No. 2558. Japanned Bracket of $1\frac{1}{4}$ inch gas pipe, with flange, four expansion bolts, wrought iron chain and adjustable chain hook on bracket; 5 feet long (or less to order) \$5.25
- No. 2556. Japanned Bracket, same as No. 2558 with addition of $\frac{1}{4}$ inch by $1\frac{1}{2}$ inch wrought iron scroll on slip-rings; 5 feet long (or less to order) \$8.50

When ordering such fixtures as above, or from other designs (which we can furnish to order), care should be taken to see that the conditions are such that the fixtures as shown will fit their intended places, or, if any alteration is required, that we have all necessary instructions.

Ornamental Arc Lamp Brackets.



No. 2660.

Wrought-Iron, extends 4 feet 6 inches.

PRICE, \$33.00.



No. 2175.

Wrought-Iron, extends 3 feet 6 inches.

PRICE, \$30.00.

When ordering such fixtures as above, or from other designs (which we can furnish to order), care should be taken to see that the conditions are such that the fixtures will fit their intended places or, if any alteration is required, that we have all necessary instructions and measurements.

PRICE LIST

GENERAL INCANDESCENT ARC LIGHT CO.

SOLE AGENTS FOR U. S. AND CANADA

OF

IMPORTED "SUN-SCHMELZER-NUREMBERG"

CARBONS.

IN EFFECT
OCTOBER 25th, 1897.

HIGHEST GRADE.
MADE IN GERMANY.

CORED CARBONS FOR DIRECT CURRENT.

	PER 1000
$\frac{3}{8}$ in. \times $7\frac{1}{2}$ in. -----	\$10.15
$\frac{3}{8}$ " \times 9 " -----	12.60
$\frac{7}{16}$ in. \times $7\frac{1}{2}$ in. -----	\$22.40
$\frac{7}{16}$ " \times 10 " -----	25.00
$\frac{7}{16}$ " \times 12 " -----	27.10
$\frac{1}{2}$ in. \times $7\frac{1}{2}$ in. <i>24.25</i> \$25.00	\$25.00
$\frac{1}{2}$ " \times 10 " <i>27.65</i> \$28.00	\$28.00
$\frac{1}{2}$ " \times 12 " <i>30.25</i> \$32.00	\$32.00
$\frac{9}{16}$ in. \times $7\frac{1}{2}$ in. -----	\$25.00
$\frac{9}{16}$ " \times 10 " -----	28.50
$\frac{9}{16}$ " \times 12 " -----	31.35
$1\frac{1}{32}$ in. \times $6\frac{1}{2}$ in. -----	\$24.70
$\frac{5}{8}$ " \times 7 " -----	27.40
$\frac{5}{8}$ " \times $7\frac{1}{2}$ " -----	28.25
$\frac{5}{8}$ " \times 10 " -----	33.50
$\frac{5}{8}$ " \times 12 " -----	40.00
$\frac{5}{8}$ " \times 14 " -----	42.50
$2\frac{3}{32}$ in. \times 10 in. -----	\$42.00

SOLID CARBONS FOR DIRECT CURRENT.

	PER 1000
$\frac{1}{4}$ in. \times 6 in. -----	\$5.00
$\frac{1}{4}$ " \times 9 " -----	7.50
$\frac{5}{16}$ in. \times 6 in. -----	\$13.80
$\frac{5}{16}$ " \times $7\frac{1}{2}$ " -----	19.70
$\frac{5}{16}$ " \times $9\frac{1}{2}$ " -----	20.75
$\frac{3}{8}$ in. \times 6 in. -----	\$14.90
$\frac{3}{8}$ " \times $6\frac{1}{2}$ " -----	20.15
$\frac{3}{8}$ " \times $7\frac{1}{2}$ " -----	21.00
$\frac{3}{8}$ " \times $9\frac{1}{2}$ " -----	22.75
$\frac{7}{16}$ in. \times 6 in. -----	\$15.40
$\frac{7}{16}$ " \times 7 " -----	21.20
$\frac{7}{16}$ " \times $7\frac{1}{2}$ " -----	21.70
$\frac{7}{16}$ " \times $8\frac{1}{2}$ " -----	22.65
$\frac{7}{16}$ " \times $9\frac{1}{2}$ " -----	23.65
$\frac{7}{16}$ " \times 12 " -----	26.05
$\frac{1}{2}$ in. \times 6 in. -----	\$16.50
$\frac{1}{2}$ " \times 7 " -----	22.40
$\frac{1}{2}$ " \times $7\frac{1}{2}$ " -----	22.95
$\frac{1}{2}$ " \times $9\frac{1}{2}$ " -----	25.25
$\frac{1}{2}$ " \times 12 " -----	28.15
$\frac{9}{16}$ in. \times 7 in. -----	\$23.35
$\frac{5}{8}$ in. \times 7 in. -----	\$26.10

CORED CARBONS FOR ALTERNATING CURRENT.

	PER 1000		PER 1000
$\frac{1}{2}$ in. \times $7\frac{1}{2}$ in. -----	\$28.30	$1\frac{1}{32}$ in. \times $9\frac{1}{2}$ in. -----	\$34.00
$\frac{1}{2}$ " \times $9\frac{1}{2}$ " -----	32.00	$\frac{5}{8}$ " \times $9\frac{1}{2}$ " -----	39.80
$1\frac{1}{32}$ " \times $7\frac{1}{2}$ " -----	26.50	$\frac{5}{8}$ " \times 10 " -----	41.20

SPECIAL SOLID CARBONS FOR ENCLOSED ARCS.

	PER 1000		PER 1000
$\frac{1}{2}$ in. \times 12 in. -----	\$34.50	$\frac{7}{16}$ in. \times 12 in. -----	\$31.70
$\frac{1}{2}$ " \times 10 " -----	30.90	$\frac{7}{16}$ " \times 10 " -----	28.85
$\frac{1}{2}$ " \times $7\frac{1}{2}$ " -----	26.75	$\frac{7}{16}$ " \times 5 " -----	16.80
$\frac{1}{2}$ " \times 7 " -----	25.95	$\frac{9}{16}$ " \times 10 " -----	24.65
$\frac{1}{2}$ " \times 5 " -----	17.85	$\frac{9}{16}$ " \times 8 " -----	22.65

CARBONS FOR SEARCH LIGHTS.

	PER 1000		PER 1000
$\frac{3}{4}$ in. \times 12 in. cored -----	\$83.50	$\frac{3}{4}$ in. \times 7 in. solid -----	\$49.75
$\frac{7}{8}$ " \times 12 " " -----	105.50	$\frac{7}{8}$ " \times 7 " " -----	62.60

GENERAL INCANDESCENT ARC LIGHT CO.

FIRST AVE. AND 33D ST., NEW YORK.

S. BERGMANN, PRESIDENT.

TELEPHONE, 1309, 38TH STREET.

DISCOUNT _____ PER CENT IN ORIGINAL PACKAGES OF 1000 OF ANY SIZE.

Testimonials

.....About Bergmann Arc Lamps.



General Incandescent Arc Light Co.

S. Bergmann, Esq., President.

My Dear Sir:

It affords me great pleasure to testify my appreciation of the good work you have done in developing the Enclosed Arc Lamps. It is certainly the acme of perfection, both electrically and mechanically, and I shall unhesitatingly recommend it to all my friends who desire an economical and beautiful electric light.

Very truly yours,

New York, May 3, 1897.

EDW. H. JOHNSON.

General Incandescent Arc Light Co.,
572 First Avenue, New York City.

Gentlemen:

In answer to your inquiry as to how the Enclosed Arc Lamps which you have made for us are working, we would say that we are more than pleased with them, and that they are giving excellent satisfaction. We have 360 of your enclosed lamps burning on our circuits, and are putting out additional ones every day.

We have examined nearly all the enclosed lamps in the market, and have tested many of them, and we consider your latest Enclosed Arc Lamp to be the simplest, strongest, easiest of repair, and best designed electrically and mechanically of any lamp of its type in the market.

Yours respectfully,

SAMUEL INSULL,

President Chicago Edison Co.

General Incandescent Arc Light Co.,
33d Street and First Avenue, New York.

Gentlemen:

Replying to your inquiry of recent date, I am pleased to inform you that the results we have received from the Bergmann Long Life Enclosed Arc Lamps at the Grand Central Station have been most satisfactory.

Your lamp was selected after a severe test in competition with several other lamps of the Enclosed Arc type.

The fact that we have increased the original number, six, to thirty-six lamps, with the intention of replacing all our open arc lamps with your enclosed arcs is more than a good indication of the very favorable results which we have obtained.

I can also say that the great saving in cost of maintenance, brilliancy of the illuminating qualities, and the perfect distribution of light are convincing arguments for the exchange of open to enclosed arc lamps.

Yours very truly,

E. L. POLLARD.

Chief Electrical Engineer,
Grand Central Station.

General Incandescent Arc Light Co.,
572 First Avenue, City.

Gentlemen:

We take pleasure in informing you that the 130 arc lamps which you furnished us have been used very largely in our press rooms where a particularly good light is required, and in every case they have given great satisfaction.

Yours very truly,

JOSEPH P. KNAPP,

President Am. Lith. Co.

New York, April 30, 1897.

New York, April 23, 1897.

Dear Sirs:

The trial made with your Bergmann Enclosed Arc Lamps has convinced us that they are the best in the market. They give the best satisfaction. All who have them in use are pleased with the light and steady service. Your prices have also been satisfactory.

Yours truly,

BOUND BROOK ELECTRIC LIGHT CO.

J. I. L.

T. C. Harnish & Co.,
City.

Cincinnati, April 27, 1897.

Gentlemen:

The Long Burning Arc Lamps which you supplied us with have been very satisfactory.

We have not tested them for length of burning but have no reason to think that they have not come up to your representations.

Yours truly,

THE GLOBE COMPANY.

By H. C. Yeiser, Sec'y.

General Incandescent Arc Light Co.,
New York, N. Y.

New York, April 4, 1897.

Gentlemen:

In response to your inquiry, we are pleased to state that your Long Life Arc Lamps are giving us complete satisfaction in every respect, and we are confident from our experience with them thus far that they will continue to do so.

Yours respectfully,

THE KELLOGG PAINT COMPANY.

General Incandescent Arc Light Co.,
572 First Avenue, New York.

New York, April 15, 1897.

Gentlemen:

We are very much pleased with your Enclosed Arc Lamps. The light is steady and very agreeable, and your representations regarding the satisfaction which they would give us have been more than substantiated.

Very truly yours,

LIVINGSTON & CO.

The Edison Electric Illuminating Co., of N. Y.

53 to 57 Duane Street,

wrote us under date of March 26th 1897, after ordering 225 of our Enclosed Arc Lamps for municipal lighting in New York City as follows, referring to the competitive test upon which this order was awarded:

"In justice to the other competitors, we wish to say that the award is made to you largely because of the excellent mechanical devices which render the lamp you submitted for test peculiarly suitable for city lighting, in which direction your experience and ingenuity have been applied to good purpose. We have made the award of this order, therefore, with reference to the superior use of your lamp for city lighting, without passing upon its relative value for interior lighting."

Mr. S. Bergmann, President,
General Incandescent Arc Light Co.,
578 First Avenue, New York City.

Philadelphia, March 10, 1897.

My Dear Sir:

I have examined and tested your Long Life Enclosed Incandescent Arc Lamp, and beg to state that, as far as my experience with the lamp permits me to form an opinion, in my judgment the lamp is well worked out mechanically, and is of more than ordinary strength in its framing and general parts. It seems to be so arranged as to facilitate rapid and effective handling. The regulation is excellent, and all details seem to have been brought to a high state of perfection in your lamp. The light is uniformly steady and very satisfactory.

Very truly yours,

J. H. VAIL.

Pure Drawn Copper Electric Light and Power Switches, Etc., Etc.

THIS Company FIRST put on the market PURE DRAWN
COPPER
BLADE SWITCHES,

of which every part was manufactured of PURE DRAWN COPPER, the conductivity of which could therefore be guaranteed.

Switches so constructed are now DEMANDED in the specifications of competent electrical engineers.

We manufacture and constantly keep on hand a full line of all ordinary sizes, and make them in any size from 15 amperes up to more than 10,000 amperes.

Prices on sizes not named in accompanying list furnished on application.

Our Switches are guaranteed of full capacity and will, in fact, carry an overload above the catalogue rating of at least 25 per cent. for a reasonable length of time without injury.

We make a specialty of High Class Electric Light and Power

SWITCH BOARDS *and* PANEL BOARDS

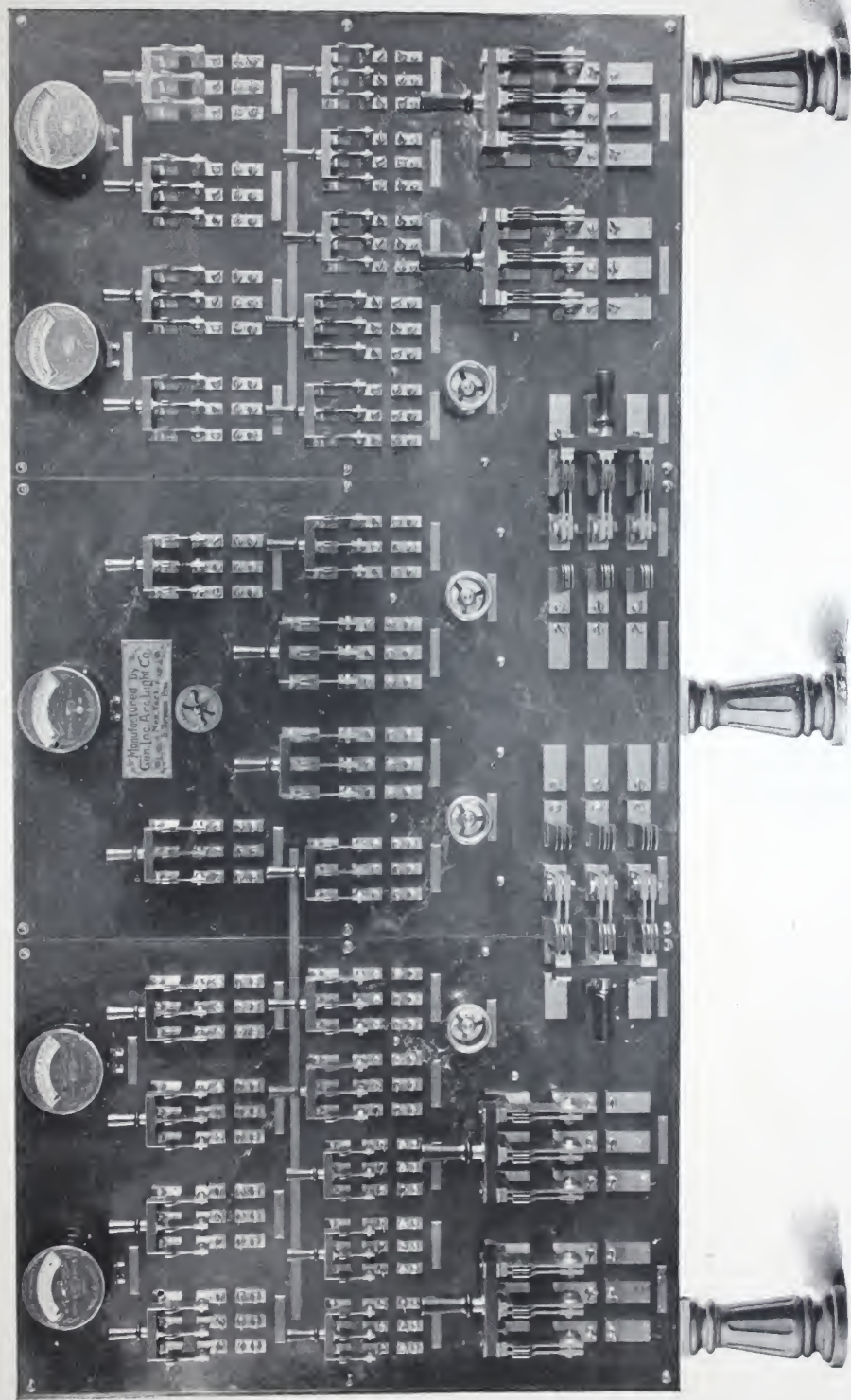
and give estimates on same on receipt of the proper data and specifications, or, if required, furnish designs for any work of this kind.

Most of the principal SWITCH BOARDS in New York and vicinity installed within the past four years, have been manufactured by us, and are to-day the recognized

STANDARD OF EXCELLENCE.

OUR PRICES ARE THE LOWEST POSSIBLE FOR THE BEST WORK.

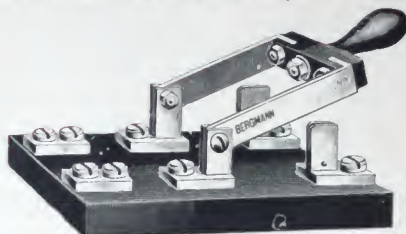
See page 37 for directions in regard to ordering. Discounts on Application.



SWITCH BOARD.
Manufactured by General Incandescent Arc Light Co.

All Drawn Pure Copper Blade Switches

Mounted on Finished Slate Bases, Single Throw Single Break.

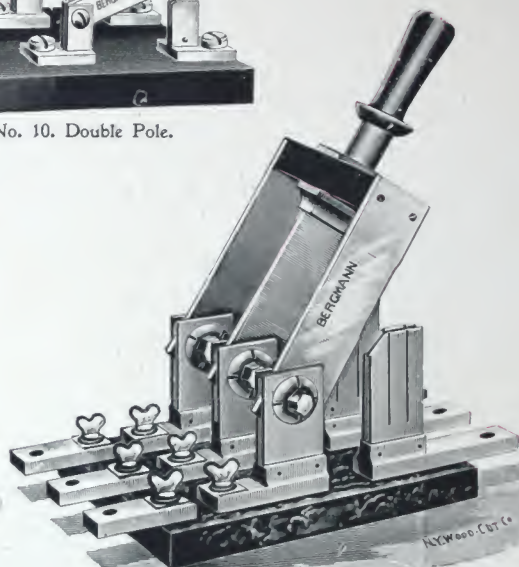


No. 10. Double Pole.

CAPACITY
UP TO
600 AMPERES.



No. 5. Single Pole.



No. 15. Triple Pole.

PRICES SINGLE BREAK BLADE SWITCHES,

Single Throw, with Safety Catch Holders.

CAPACITY IN AMPERES UP TO		25	50	100	200	300	400	600
No. 5	PLAIN S. P.	\$.99	\$2.97	\$3.63	\$4.95	\$5.46	\$5.94	\$8.55
	POLISHED . . . S. P.	1.20	3.57	4.26	5.94	6.54	7.14	10.29
No. 10	PLAIN D. P.	1.65	3.96	5.94	7.20	9.00	10.23	13.86
	POLISHED . . . D. P.	1.98	4.77	7.14	9.30	10.80	12.27	16.62
No. 15	PLAIN T. P.	2.31	5.28	8.91	11.22	13.20	15.18	20.79
	POLISHED . . . T. P.	2.79	6.36	10.71	13.47	15.84	18.21	24.96

Single Throw, without Safety Catch Holders.

CAPACITY IN AMPERES UP TO		25	50	100	200	300	400	600
No. 5	PLAIN S. P.	\$.90	\$2.73	\$3.36	\$4.59	\$5.04	\$5.49	\$7.95
	POLISHED . . . S. P.	1.08	3.27	4.05	5.52	6.06	6.60	9.54
No. 10	PLAIN D. P.	1.50	3.66	5.49	7.17	8.34	9.48	12.84
	POLISHED . . . D. P.	1.80	4.38	6.60	8.61	9.99	11.37	15.42
No. 15	PLAIN T. P.	2.10	4.86	8.23	10.38	12.21	14.04	19.14
	POLISHED . . . T. P.	2.52	5.85	9.90	12.45	14.67	16.86	22.95

For prices of corresponding Double Break Switches, see page 32.

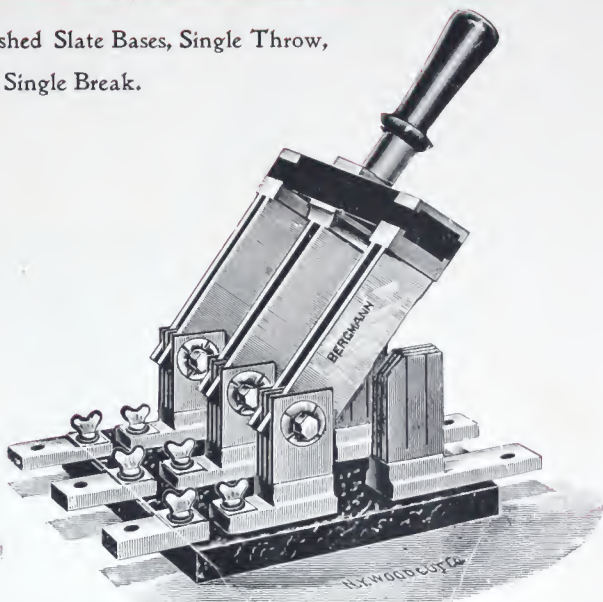
All Drawn Pure Copper Blade Switches.

Mounted on Finished Slate Bases, Single Throw,
Single Break.

Capacity
up to
1,800 Amperes.



No. 25. Single Pole.



No. 30. Double Pole.
No. 35. Triple Pole.

PRICES OF SINGLE BREAK BLADE SWITCHES,

Single Throw, with Safety Catch Holders.

CAPACITY IN AMPERES UP TO . . .			800	1200	1800
No. 25	{ PLAIN S. P.		\$13.80	\$18.15	\$25.41
	{ POLISHED . . S. P.		16.56	21.78	30.49
No. 30	{ PLAIN D. P.		23.23	36.30	43.56
	{ POLISHED . . D. P.		27.88	43.56	52.27
No. 35	{ PLAIN T. P.		35.57	58.08	65.34
	{ POLISHED . . T. P.		42.70	69.70	78.41

Single Throw, without Safety Catch Holders.

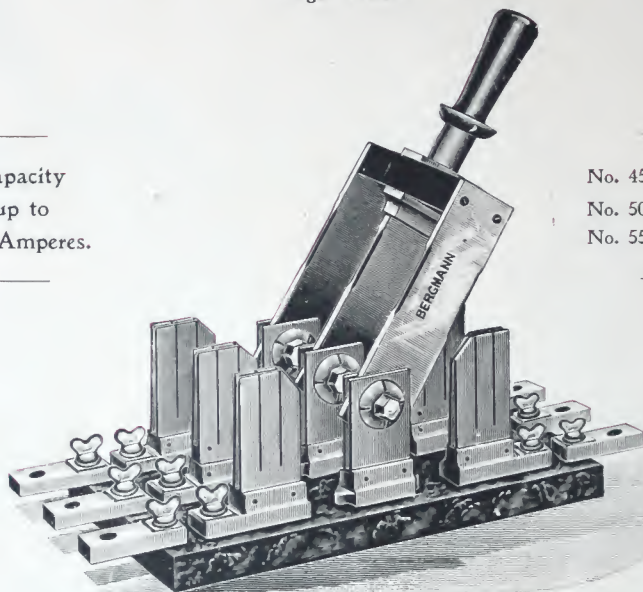
CAPACITY IN AMPERES UP TO . . .			800	1200	1800
No. 25	{ PLAIN S. P.		\$12.77	\$16.79	\$23.50
	{ POLISHED . . S. P.		15.34	20.16	28.12
No. 30	{ PLAIN D. P.		21.42	33.59	40.29
	{ POLISHED . . D. P.		26.37	40.33	48.34
No. 35	{ PLAIN T. P.		32.90	53.72	60.46
	{ POLISHED . . T. P.		39.47	64.48	72.53

For prices of corresponding Double Break Switches, see page 33.

All Drawn Pure Copper Blade Switches

Mounted on Finished Slate Bases, Double Throw,
Single Brake.

Capacity
up to
600 Amperes.



No. 45. Single Pole.
No. 50. Double Pole.
No. 55. Triple Pole.

PRICES OF SINGLE BREAK BLADE SWITCHES,

Double Throw, with Safety Catch Holders.

CAPACITY IN AMPERES UP TO		25	50	100	200	300	400	600
No. 45	{ PLAIN S. P.	\$1.77	\$5.28	\$6.48	\$8.82	\$9.69	\$10.56	\$15.24
	{ POLISHED . . . S. P.	2.13	6.36	7.80	10.56	11.64	12.69	18.30
No. 50	{ PLAIN D. P.	2.97	7.05	10.56	13.77	16.02	18.21	24.66
	{ POLISHED . . . D. P.	3.57	8.46	12.69	16.53	19.20	21.84	29.58
No. 55	{ PLAIN T. P.	4.14	9.42	15.84	19.98	23.49	27.00	36.96
	{ POLISHED . . . T. P.	4.98	11.28	19.02	23.97	28.20	32.40	44.37

Double Throw, without Safety Catch Holders.

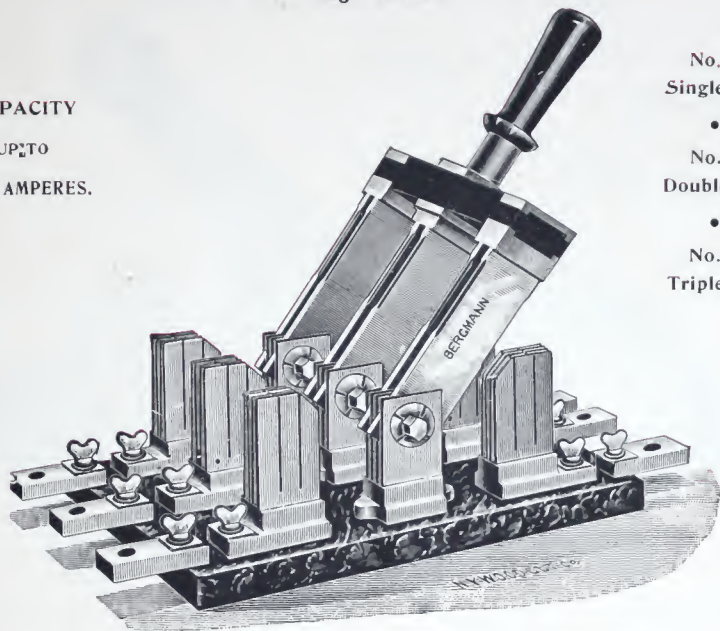
CAPACITY IN AMPERES UP TO		25	50	100	200	300	400	600
No. 45	{ PLAIN S. P.	\$1.62	\$4.65	\$5.76	\$7.86	\$8.61	\$9.36	\$13.56
	{ POLISHED . . . S. P.	1.92	5.58	6.93	9.45	10.38	11.25	16.29
No. 50	{ PLAIN D. P.	2.70	6.24	9.36	12.24	14.25	16.20	21.93
	{ POLISHED . . . D. P.	3.24	7.50	11.25	14.73	17.10	19.44	26.34
No. 55	{ PLAIN T. P.	3.78	8.28	14.10	17.73	20.85	23.97	32.58
	{ POLISHED . . . T. P.	4.53	9.96	16.92	21.30	25.05	28.77	39.09

For prices of corresponding Double Brake Blade Switches, see page 33.

All Drawn Pure Copper Blade Switches

Mounted on Finished Slate Bases, Double Throw,
Single Break.

CAPACITY
UP TO
1,800 AMPERES.



No. 65.
Single Pole.

• •

No. 70.
Double Pole.

• •

No. 75.
Triple Pole.

PRICES OF SINGLE BREAK BLADE SWITCHES, Double Throw, with Safety Catch Holders.

CAPACITY IN AMPERES UP TO . . .		800	1200	1800
No. 65	{ PLAIN S. P.	\$24.52	\$32.27	\$45.21
	{ POLISHED . . . S. P.	29.44	38.74	54.25
No. 70	{ PLAIN D. P.	41.32	64.55	77.45
	{ POLISHED . . . D. P.	49.60	77.48	93.36
No. 75	{ PLAIN T. P.	63.23	103.29	116.16
	{ POLISHED . . . T. P.	75.90	123.95	139.39

Double Throw, without Safety Catch Holders.

CAPACITY IN AMPERES UP TO . . .		800	1200	1800
No. 65	{ PLAIN S. P.	\$21.78	\$28.64	\$40.09
	{ POLISHED . . . S. P.	26.14	34.39	48.11
No. 70	{ PLAIN D. P.	37.14	57.38	68.74
	{ POLISHED . . . D. P.	44.00	68.87	82.33
No. 75	{ PLAIN T. P.	56.10	91.67	103.16
	{ POLISHED . . . T. P.	67.32	113.52	123.78

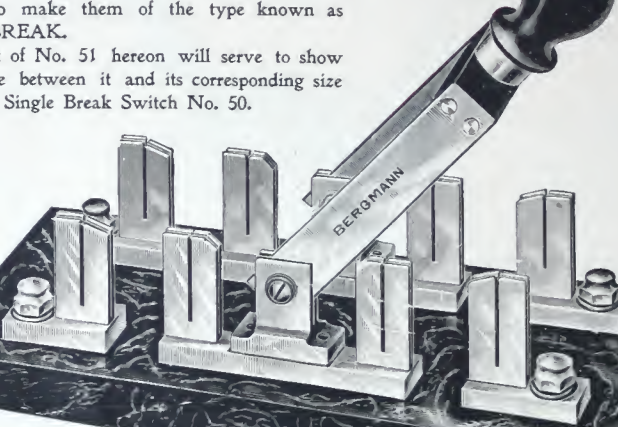
For Prices of Corresponding Double Break Switches, see page 33.

MOUNTED ON FINISHED SLATE BASES.

We also make them of the type known as DOUBLE BREAK.

All the Switches illustrated on pages 28, 29, 30
31 are of the type known as SINGLE BREAK.
We also make them of the type known as
DOUBLE BREAK.

The cut of No. 51 hereon will serve to show
difference between it and its corresponding size
style of Single Break Switch No. 50.



No. 51.

No. 51.

No. 6 is the Double Break Switch corresponding to No. 5.

No. 31 " " " " " " " " No. 30. Etc., etc.

With this explanation the following Price List will be clear.

CAPACITY IN AMPERES UP TO . . .		25	50	100	200	300	400	600
No. 6	{ PLAIN S. P.	\$1.29	\$3.86	\$4.72	\$6.44	\$7.10	\$7.72	\$11.15
	{ POLISHED . . . S. P.	1.56	4.64	5.54	7.72	8.50	9.28	13.38
No. 11	{ PLAIN D. P.	2.15	5.15	7.72	9.36	11.70	13.30	18.02
	{ POLISHED . . . D. P.	2.57	6.20	9.28	12.09	14.04	15.95	21.61
No. 16	{ PLAIN T. P.	3.00	6.86	11.58	14.58	17.16	19.73	27.03
	{ POLISHED . . . T. P.	3.63	8.27	13.92	17.51	20.59	23.67	32.45

CAPACITY IN AMPERES UP TO		25	50	100	200	300	400	600
No. 6	{ PLAIN S. P.	\$1.17	\$3.55	\$4.37	\$5.97	\$6.55	\$7.14	\$10.34
	{ POLISHED . . . S. P.	1.40	4.25	5.27	7.18	7.88	8.97	12.40
No. 11	{ PLAIN D. P.	1.95	4.76	7.14	9.32	10.84	12.32	16.69
	{ POLISHED . . . D. P.	2.34	5.69	8.58	11.19	12.99	14.78	20.04
No. 16	{ PLAIN T. P.	2.73	6.32	10.73	13.49	15.87	18.25	24.88
	{ POLISHED . . . T. P.	3.28	7.61	12.87	16.19	19.07	21.92	29.87

32

ALL DRAWN PURE COPPER

"DOUBLE BREAK" BLADE SWITCHES,

MOUNTED ON FINISHED SLATE BASES.

(FOR DESCRIPTION SEE PRECEDING PAGE.)

Single Throw.		With Safety Catch Holders.			Without Safety Catch Holders.		
CAPACITY IN AMPERES UP TO . . .		800	1200	1800	800	1200	1800
No. 26. Single Pole	Plain	\$17.94	\$23.60	\$33.03	\$16.60	\$21.83	\$30.55
	Polished	21.53	28.31	39.64	19.94	26.21	36.56
No. 31. Double Pole	Plain	30.20	47.19	56.63	27.85	43.67	52.38
	Polished	36.24	56.63	67.95	34.28	52.43	62.84
No. 36. Triple Pole	Plain	46.24	75.50	84.94	42.77	69.84	78.60
	Polished	55.51	90.61	101.93	51.31	83.82	94.29

Double Throw, with Safety Catch Holders.

CAPACITY IN AMPERES UP TO . . .		25	50	100	200	300	400	600
No. 46. Single Pole	Plain	\$2.30	\$6.86	\$8.42	\$11.47	\$12.60	\$13.73	\$19.81
	Polished	2.77	8.27	10.14	13.73	15.13	16.50	23.79
No. 51. Double Pole	Plain	3.86	9.17	13.73	17.90	20.83	23.67	32.06
	Polished	4.64	11.00	16.50	21.49	24.96	28.39	38.45
No. 56. Triple Pole	Plain	5.38	12.25	20.59	25.97	30.54	35.10	48.05
	Polished	6.47	14.66	24.73	31.16	36.66	42.12	57.68

Double Throw, without Safety Catch Holders.

CAPACITY IN AMPERES UP TO . . .		25	50	100	200	300	400	600
No. 46. Single Pole	Plain	\$2.11	\$6.05	\$7.49	\$10.22	\$11.19	\$12.17	\$17.63
	Polished	2.50	7.25	9.01	12.29	13.49	14.63	21.18
No. 51. Double Pole	Plain	3.51	8.11	12.17	15.91	18.53	21.06	28.51
	Polished	4.21	9.75	14.63	19.15	22.23	25.27	34.24
No. 56. Triple Pole	Plain	4.91	10.76	18.33	23.05	27.11	31.16	42.35
	Polished	5.89	12.95	22.00	27.69	32.57	37.40	50.82

Double Throw.		With Safety Catch Holders.			Without Safety Catch Holders.		
CAPACITY IN AMPERES UP TO . . .		800	1200	1800	800	1200	1800
No. 66. Single Pole	Plain	\$31.88	\$41.95	\$58.77	\$28.31	\$37.23	\$52.12
	Polished	38.27	50.36	70.53	33.98	44.71	62.54
No. 71. Double Pole	Plain	53.72	83.92	100.69	48.28	74.59	89.36
	Polished	64.48	100.72	121.37	57.20	89.53	107.03
No. 76. Triple Pole	Plain	82.20	134.28	151.01	72.93	119.17	134.11
	Polished	98.67	161.14	187.21	87.52	147.58	160.91

For Prices of Corresponding Single Break Switches, see Pages 29, 30 and 31.

ALL DRAWN PURE COPPER "QUICK BREAK" BLADE SWITCHES,

FOR LOW AMPERAGES.



No. 80. Single Pole.

Mounted on Finished Slate Bases,
FOR
MOTOR and OTHER WORK

WHICH REQUIRES
Instantaneous
Breaking
of the Circuit
on Opening
the Switch. . .



No. 85. Double Pole, No. 90. Triple.

We make the type of Quick Break Switches illustrated above
in three sizes, viz : 25, 50 and 100 amperes.

For Switches of Greater Capacity, see below and on next page.

PRICES.

CAPACITY IN AMPERES UP TO		Without Safety Catch Holders.			With Safety Catch Holders.		
		25	50	100	25	50	100
No. 80. Single Pole	Plain	\$1.50	\$3.95	\$5.20	\$1.60	\$4.10	\$5.40
	Polished	1.80	4.75	6.25	1.90	4.90	6.30
No. 85. Double Pole	Plain	2.35	5.35	8.00	2.55	5.65	8.40
	Polished	2.85	6.40	9.60	3.05	6.80	10.10
No. 90. Triple Pole	Plain	3.20	7.00	11.50	3.50	7.45	12.10
	Polished	3.85	8.40	13.80	4.20	8.95	14.50



No. 125. Double Break, Single Pole.

"Quick Break" Railway Feeder Switch,

FOR 500 VOLT CIRCUITS,

Mounted on Finished Slate Bases.

PRICES, INCLUDING CABLE LUGS, AS SHOWN:

No. 125.	Capacity	100	Ampere	x	500	Volts,	Plain	\$7.90
No. 125.	"	200	"	x	500	"	"	8.90
No. 125.	"	300	"	x	500	"	"	9.90

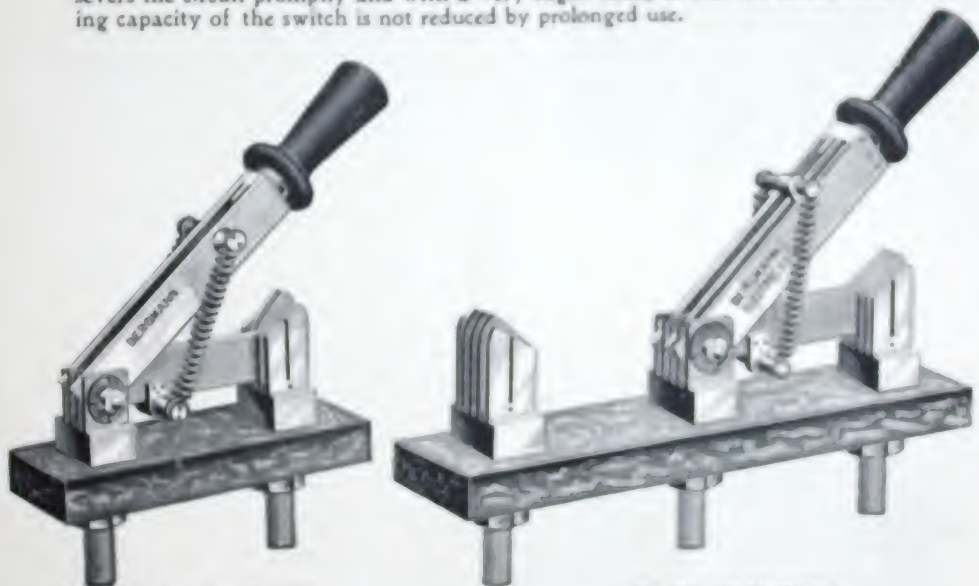
ALL DRAWN PURE COPPER

"QUICK BREAK" BLADE SWITCHES

FOR HIGH AMPERAGES.
MOUNTED ON FINISHED SLATE BASES.
PATENTED.

For railway work that requires a switch to break a large amount of current at a high voltage, past experience has shown the defect in switches now used for this work to be that the arc of breaking roughens the contact surfaces and rapidly reduces their carrying capacity, leading them to heat badly with normal loads.

In our switch shown on this page, we have used a form of construction which overcomes this objection. First the current carrying blades are in no way affected by the arc in breaking, as the current is broken by a separate and independent blade, and at a different point of the switch joints than that used for contact. We have also made the breaking blade light and under a high spring tension at breaking, which gives an instantaneous and long break, and under all conditions severs the circuit promptly and with a very slight flash, so that the current carrying capacity of the switch is not reduced by prolonged use.



No. 126. Single Throw.

No. 127. Double Throw.

SINGLE POLE	150	250	400	600	1000	1500
	AMPERES	AMPERES	AMPERES	AMPERES	AMPERES	AMPERES
No. 126	\$15.00	\$18.00	\$22.50	\$34.00	\$55.00	\$85.00
No. 127	\$25.00	\$27.00	\$34.00	\$50.00	\$84.00	\$125.00

Double Pole, twice above prices; Triple Pole, three times above prices.

For sizes of less than 150 amperes capacity, use our other type of Quick Break Switches, shown on page 34.

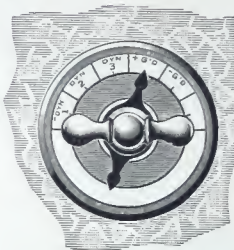
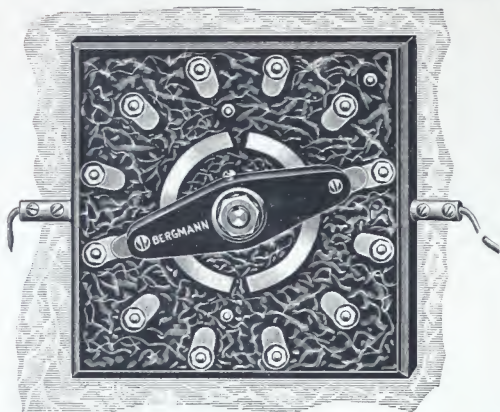
BERGMANN Radial Volt Meter and Ground Detector Switches

FOR DIRECT MOUNTING ON SWITCH BOARDS.

Handle, Indicator and Dial only, show on face of board. Rear portion of Switch is mounted on a substantial Slate Base.

PRICES.

4 Circuit, No. 131	-	-	-	-	\$15.00
6 " " "	-	-	-	-	16.50
8 " " "	-	-	-	-	18.00
10 " " "	-	-	-	-	21.00
12 " " "	-	-	-	-	24.00



No. 131.

Visible parts
are Copper or
Nickel-plated,
as preferred.

In ordering Volt Meter Switches give the necessary data for lettering Dial.



BERGMANN Radial Differential Volt Meter Switch

FOR DIRECT MOUNTING ON SWITCH BOARDS.

Handle, Indicator and Dial only, show on face of board. Rear portion of Switch is mounted on a substantial Slate Base.

Designed for use with differential galvanometers in obtaining uniform voltage where several dynamos are run in multiple on the same system.

4 Circuit, No. 133, Price - - - \$30.00

Visible parts are Copper or Nickel-plated, as preferred.



No. 133.



Price of Connections (No. 134) for our Blade Switches

FOR SINGLE THROW.

25 AMPERES, 1 POLE	\$0.27
25 " 2 "54
25 " 3 "81
50 " 1 "69
50 " 2 "	1.35
50 " 3 "	2.00
100 " 1 "87
100 " 2 "	1.74
100 " 3 "	2.79
200 " 1 "93
200 " 2 "	1.86
200 " 3 "	2.94
300 " 1 "	1.20
300 " 2 "	2.40
300 " 3 "	3.60
400 " 1 "	1.62
400 " 2 "	3.24
400 " 3 "	4.80
600 " 1 "	2.13
600 " 2 "	4.26
600 " 3 "	6.39
800 " 1 "	2.94
800 " 2 "	5.88
800 " 3 "	8.82
1200 " 1 "	4.02
1200 " 2 "	8.01
1200 " 3 "	12.00
1800 " 1 "	4.14
1800 " 2 "	8.28
1800 " 3 "	12.66

FOR DOUBLE THROW.

25 AMPERES, 1 POLE	\$0.39
25 " 2 "81
25 " 3 "	1.20
50 " 1 "	1.20
50 " 2 "	2.40
50 " 3 "	3.60
100 " 1 "	1.74
100 " 2 "	3.48
100 " 3 "	5.22
200 " 1 "	1.86
200 " 2 "	3.72
200 " 3 "	5.58
300 " 1 "	2.46
300 " 2 "	4.80
300 " 3 "	7.41
400 " 1 "	3.30
400 " 2 "	6.66
400 " 3 "	9.99
600 " 1 "	4.26
600 " 2 "	8.52
600 " 3 "	12.78
800 " 1 "	5.73
800 " 2 "	11.46
800 " 3 "	17.79
1200 " 1 "	8.67
1200 " 2 "	17.34
1200 " 3 "	25.98
1800 " 1 "	9.99
1800 " 2 "	19.98
1800 " 3 "	30.00

For Single Pole Switches, as above, 2 connections.
 " Double " " " 4 "
 " Three " " " 6 "

For Single Pole Switches, as above, 3 connections.
 " Double " " " 6 "
 " Three " " " 9 "



IN ORDERING.

In furnishing switches the following information is necessary:

- With or without Safety Catch Holders?.....
- Cne or both ends of Switch for Bus Bar or Cable?.....
- If wanted on Wood instead of Slate Base—state thickness.....
- Thickness of Switch Board?.....
- Plain or Polished?.....
- Distances from rear of Board to Bus Bars?.....
- Front or rear Connections?.....
- Sizes of holes in Cable Terminals?.....



N. B.—Give as much information as possible, regarding conditions, to ensure correct filling of orders. If necessary information does not accompany orders, it will cause delay until receipt of same.

Cable Lugs for Blade Switches.



No. 135.



No. 140.

We furnish Cable Lugs without boring the hole to receive the cable when the size of Cable is not specified with the order.

Contact faces are made to fit our Blade Switches corresponding in ampere capacity.

Prices of No. 140 and No. 135.

		PLAIN.	POLISHED.
No. 140.	25 Amperes	\$0.11	\$0.12
	50 "	.15	.17
	100 "	.29	.34
	150 "	.29	.34
	200 "	.44	.49
	300 "	.58	.65
No. 135.	400 "	.58	.65
	600 "	.73	.80
	800 "	.97	1.07
	1200 "	2.20	2.44
	1800 "	3.34	3.67

Safety Catch Holders on Slate Bases.

These Safety Catch Holders are furnished as shown, i. e., with one end for cable or rod connection and the other end for flat bar connection, or with both ends cable connections, or both ends flat bar connections. Care should be exercised in ordering to state which is desired, otherwise we will furnish as illustrated.



No. 145. Single Pole.

PRICES.

100 Amp., \$1.25; 200 Amp., \$1.50; 300 Amp., \$2.00.
 400 " 2.50; 600 " 3.40; 800 " 4.60.
 1200 " 6.70; 1800 " 9.60.

BABY KNIFE SWITCH,



No. 141.

On
Porce-
lain
Base.

Capacity 15 Amperes.

Double Pole No. 141. Price \$0.40.

Double Pole

Snap Switches,

On Porcelain Bases.



Nos. 142 and 143.

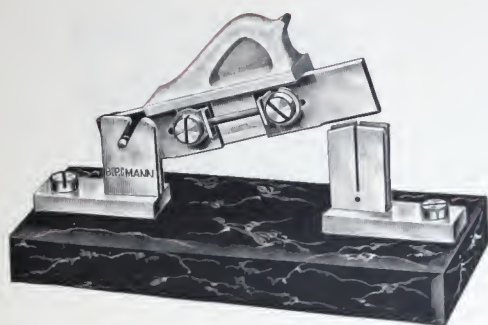
Made in two sizes only; 10 and 15 Amperes.

PRICES.

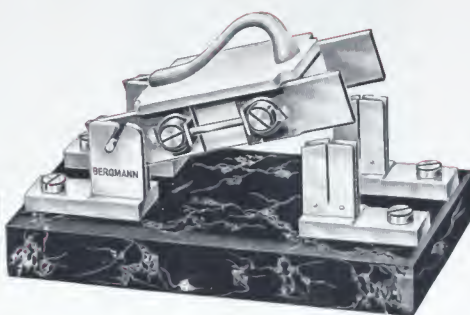
10 Amperes, No. 142, Brass, \$0.60. Nickel P., \$0.75.
 15 " No. 143, " .75. " " .90.

Removable Fuse Holders.

MOUNTED ON SLATE BASES.



No. 147. Single Pole.



No. 148. Double Pole.

As shown in above cut the Removable Fuse Holder is constructed on lines similar to our Standard Knife Blade Switches. The base has mounted on it the terminals with their receiving clips, while the fuses, which are mounted on a porcelain piece, are extended by means of drawn copper blades which fit into the receiving clips before mentioned.

The entering blade is provided with a pin or pivot which fits into a corresponding slot in the receiving clips, so made that the Removable Fuse Holder may be operated as a switch as well.

The sizes we make of the above at present are, 50 and 100 amperes, Single and Double Pole, and 15 amperes, Double Pole only.

PRICES.

		15 AMPERES.	50 AMPERES.	100 AMPERES
No. 147	{ SINGLE POLE, PLAIN . .		\$2.97	\$3.63
	{ " " POLISHED		3.57	4.26
No. 148	{ DOUBLE POLE, PLAIN . .	\$0.50	3.96	5.94
	{ " " POLISHED	.65	4.77	7.14

Discount—per cent.

THE BERGMANN Attaching Plug and Flush Receptacle,

FOR WALL, FLOOR OR SURBASE.

PRICE LIST.

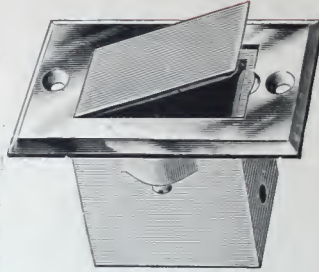
943. Receptacle, with Lid, \$1.15.
941. Plug, - - - - - 1.15.
Capacity 15 Amperes.

Discount — per cent.



PLUG.
No. 941.

The Receptacle is made in the best manner, of metal and porcelain. The Plug, of hard rubber and copper. The Receptacle is provided with a lid for closing flush with the floor or wall, when

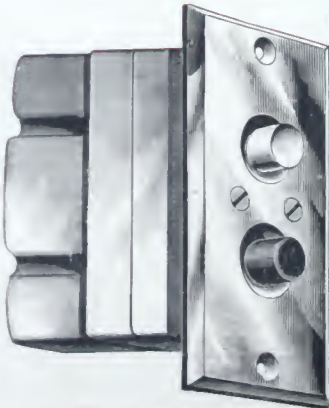


RECEPTACLE.
No. 943.

the Plug is withdrawn. All the plugs are interchangeable. The Face Plate is furnished in Polished Brass, unless otherwise ordered. The following are a few of the places for which they are adapted: Office desks, for light and fans; every room in large hotels and residences; portable show-cases and portable brackets; every cot in hospitals for light, power and electro-medical purposes. In fact, any place where electric connection is desired. Passed by the Board of Fire Underwriters and endorsed by all the Leading Electrical Engineers.

Bergmann Flush Push Switch,

DOUBLE BREAK.



No. 951 A, B & C.

This Switch is constructed in the best manner, and the defects and imperfections of other makes of Flush Switches have been carefully eliminated therefrom. It is of new design, compact, well made and finished, and fire and water proof. Connections are handy and secure, and the Switches cannot get out of order from use after it is properly installed.

Unless otherwise ordered, Face Plates are furnished in Polished Brass. Size of Face Plate, $2\frac{1}{4} \times 4\frac{1}{2}$.

PRICE.

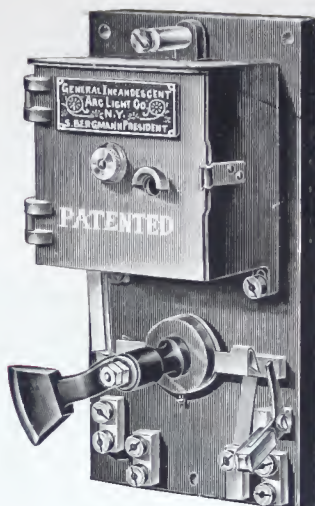
- | | | |
|--|---------|--------|
| 951A—Double Pole, Polished Brass, or Nickel Plate, | - - - - | \$1.85 |
| 951B—Single Pole, " " " " | - - - - | \$1.85 |
| 951C—Three Way, " " " " | - - - - | \$1.85 |

Discount — per cent.

Patented Electric Clock Switch.

MOUNTED ON SLATE BASE.

CAPACITY, 10 AMPERES.



No. 160.

This Switch was designed primarily for use on the Municipal Arc Light Service of the Edison Electric Illuminating Company of Brooklyn, but is, of course, applicable for use in offices, show windows, hotels, etc., or on any direct or alternating current circuit, not exceeding 125 volts of pressure.

It operates both to turn on the current at whatever hour of the day the dial is set for and later on to cut it off again at any desired time.

It is not a magnetic, but a mechanical switch, operated by means of a clock movement, which is wound when the switch is set.

We refer to the Edison Electric Illuminating Company of Brooklyn regarding the great success it has had with this Electric Clock Switch system, and the considerable saving in operating expenses accomplished thereby, which amounts to more than its first cost each year.

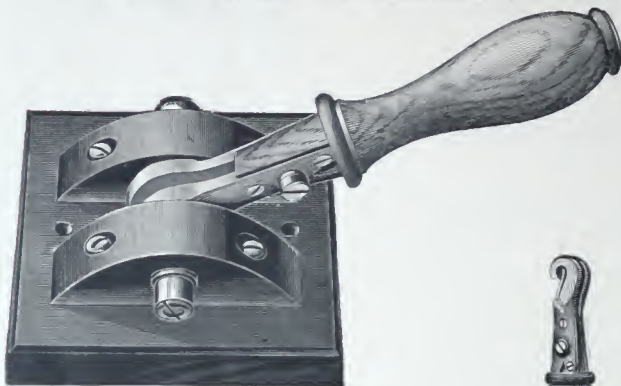
The clock movement is protected by a neat Iron Japanned case, with hinged door. The switch part is free, and readily accessible. A case, enclosing the entire switch, can be furnished if desired. All the parts are insulated in the best manner, and the work is strong and substantial.

No. 160. Electric Clock Switch, as illustrated, Price, \$14.40

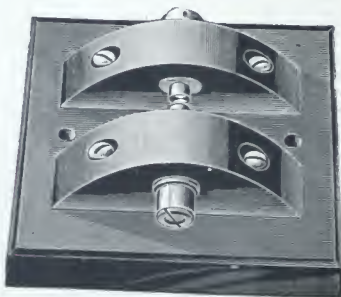
Discount——per cent.

FIRE AND WATER PROOF ATTACHING HOOK AND RECEPTACLE.

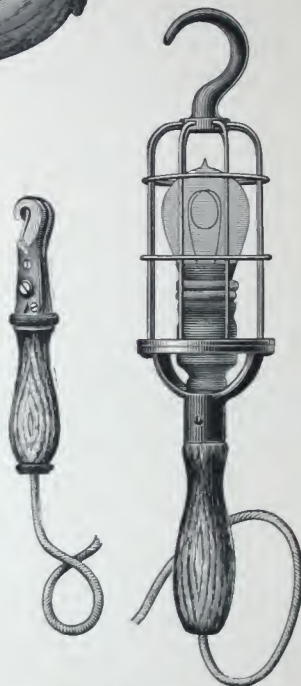
MOLENDO PATENT,
OF WHICH WE ARE SOLE LICENSEES AND MANUFACTURERS.



No. 971.



No. 972.



No. 973.

The above Attaching Hook and Receptacle is one of the best and most effective devices in the market for connecting portable electric lights, or any other portable electric apparatus to stationary circuits. It is especially designed for places where moisture, steam or humidity destroy most of these devices within a very short time, and is therefore of great value to breweries, distilleries, dye houses, slaughter houses, mines, tunnels, etc., etc. Carelessness or darkness of the room cannot cause a short circuit, or a reversing of the polarity on the portable apparatus in making the connection. The contacts are securely established, electrically and mechanically; they will carry a current of 15 amperes without heating, and can also stand a considerable overload for a long time without being damaged.

PRICE LIST.

No. 971. Attaching Hook, each, -	\$2.40	No. 974. Rubber Socket Cover, each,	\$0.09
" 972. Receptacle, " -	3.30	" 976. Keyless Socket, "	.24
" 973. Wire Guard, " -	3.00	" 977. Flexible Cable, per foot,	.14

SPECIAL ESTIMATES MADE ON QUANTITIES. DISCOUNT _____ PER CENT.

Panel Boards

FOR

ELECTRIC LIGHT WIRING, ETC.

The Panel Boards constitute a very important feature of Electric Light Wiring Installations. On the excellence of their design and construction and their adaptability to the requirements of the system of lighting employed, rests considerably the success of the installation and, consequently, the success of the contractor who has installed it.

Panel Boards are very generally displacing individual cut-outs and switches, and, in fact, are required in the specifications of experienced engineers and architects for all first-class work.

The standard of excellence in workmanship and materials which have been set by us in our Switches and Switch Boards is uniformly sustained in our Panel Boards. They are mounted on finished slate; the Bus Bars, Circuit Strips, Terminals, Switches, etc., are all of pure drawn copper, the conductivity of which is guaranteed of ample capacity, first-class fit and workmanship, and will be a credit to all contractors who install them.

Our extensive experience with the requirements of Electric Installation has shown us that Panel Boards may be standardized to considerable advantage; that there are certain well defined types which are required in nearly every installation, and that, by reference to these standard types, most others may be intelligently ordered with a great saving of time and expense to the contractor and without the need of making special drawings.

The methods of Electric Light Wiring usually employed in modern buildings may be divided into the following general classes:

- 1st—Separate Feeders for each floor (or each Panel, as the case may be).
- 2d—Continuous Mains passing through all floors (or all Panels).
- 3d—Same as 2d, with Feeder as Centre of Distribution, usually entering at about the middle of the mains.

In the first case, the Panel Board for the Branch Circuits will be at the end of the Feeder, the general type of which is shown on pages 45 and 48.

In the second case, the Panel Board for the Branch Circuits will tap the Feeder, the general type of which is shown on page 46.

In the third case, a Panel Board is added to one Distributing Centre of the general type, shown on page 47, allowing the connection of the Branch Circuits and of the Main, which will lead to other Panels of the type shown on page 46, if tapping the Mains, and as shown on page 45, if at the end of the Mains.

Such modifications of each of these general types as are not covered by our catalogue descriptions can be intelligently ordered by reference to those which are described, and stating wherein the specific requirements differ from regular.

For the purpose of describing our Panel Boards, we have, in addition to catalogue numbers, adopted a system of reference symbols, of which the following will furnish the key:

3=3-wire System.

2=2-wire System.

3/2=3-wire System convertible into 2-wire System, the middle bus bar being made of double the carrying capacity of each of the outsides.

V=Vertically placed on Feeder End.

S=Switches on Branch Circuits.

M=Meter Loop Connections added.

F=Feeder Terminals added.

R=Removable Fuse Holders, in place of Link Fuse Connections and Switches.

A=Link Fuse Connections without Switches on Branch Circuits.

For the sake of clearness the Panel Boards are shown in our cuts as when already mounted in the cabinets; but the cabinets and the slate linings for same, as well as the side slates directly inclosing the panels and the top covering slate (which goes on the cabinet door), are not included in the prices of the Panel Boards. The prices for these slates are given in the proper place and include necessary cutting and drilling.

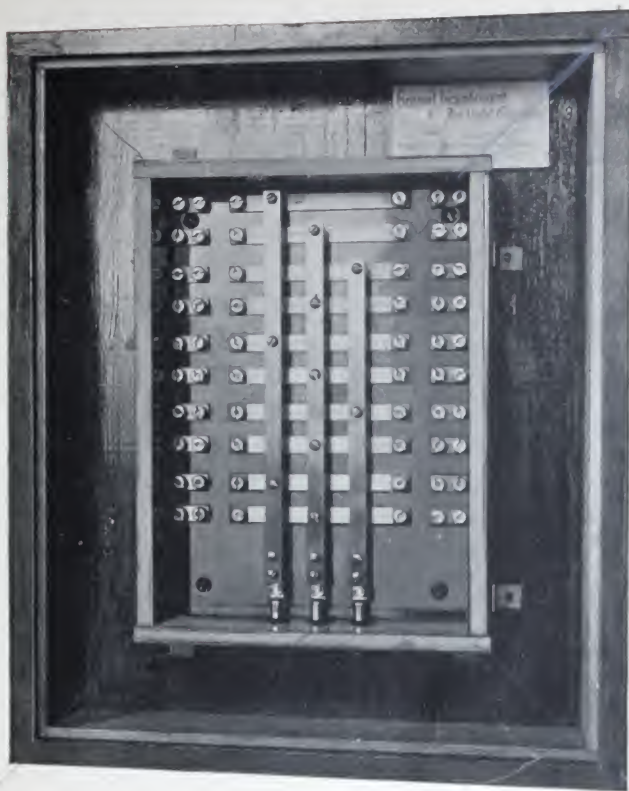
The Dimensions of all Panel Boards, their Slate Frames and Linings, may be calculated from the following measurements of the 10 Circuit Panels by adding to or subtracting from the figures given in column "Length," those given in column "Difference" for each two circuits.

Page.	STYLE.	Length.	Width.	Difference.	Depth of Cabinet.
45	V 3 A	13 $\frac{1}{4}$	9 $\frac{1}{4}$	2 $\frac{1}{8}$	3
"	V 2 A	13 $\frac{1}{4}$	8	2 $\frac{1}{8}$	3
"	V 3 S	13 $\frac{1}{4}$	12 $\frac{1}{4}$	2 $\frac{1}{8}$	3
"	V 2 S	13 $\frac{1}{4}$	11	2 $\frac{1}{8}$	3
46	3 A M and 3 A	25	8 $\frac{3}{8}$	2 $\frac{1}{8}$	3
"	2 A M and 2 A	25	7 $\frac{1}{8}$	2 $\frac{1}{8}$	3
"	3 S M and 3 S	26 $\frac{1}{2}$	11 $\frac{1}{2}$	2 $\frac{1}{8}$	3
"	2 S M and 2 S	26 $\frac{1}{2}$	10 $\frac{1}{4}$	2 $\frac{1}{8}$	3
47	3 S M F and 3 A M F	26 $\frac{1}{2}$	12	2 $\frac{1}{8}$	3
"	2 S M F and 2 A M F	26 $\frac{1}{2}$	10 $\frac{1}{4}$	2 $\frac{1}{8}$	3
48	3 R M, 3 R and 3 R M F	15 $\frac{7}{8}$	13 $\frac{3}{8}$	2 $\frac{1}{4}$	4
"	2 R M, 2 R and 2 R M F	15 $\frac{7}{8}$	10 $\frac{7}{8}$	2 $\frac{1}{4}$	4

For each of the sides forming the Slate Frames add $\frac{1}{2}$ inch. Cabinet Lining Slates are $\frac{1}{4}$ inch thick.

For all Panel Boards up to 10 Branch Circuits we employ $\frac{1}{2} \times \frac{1}{8}$ inch pure drawn copper strips for bus bars, and increase the same in proportion for a greater number of Branch Circuits on the basis of 1,000 Amperes to the square inch.

Estimates for all kinds of Panel Board Work cheerfully furnished; also for Telephone Connection Boards, etc.



Panel Boards

- No. 901. V 3 A.
 " 902. V 2 A.
 " 903. V 3 S.
 " 904. V 2 S.

This cut illustrates
 Panel V 3 A, with 3
 Wire Bus Bars and 2
 Wire Branch Circuits
 (for Link Fuses)
 Adapted to 3 2 Wire
 System or
 3 Wire System.

Also made as Panel
 V 2 A, for straight 2
 Wire System.

Also made as Panel
 V 3 S, which differs
 from V 3 A simply in
 the addition of a Double
 Pole Knife Switch on
 each branch circuit.

Also made as Panel
 V 2 S for straight 2 Wire
 System.

PRICES.

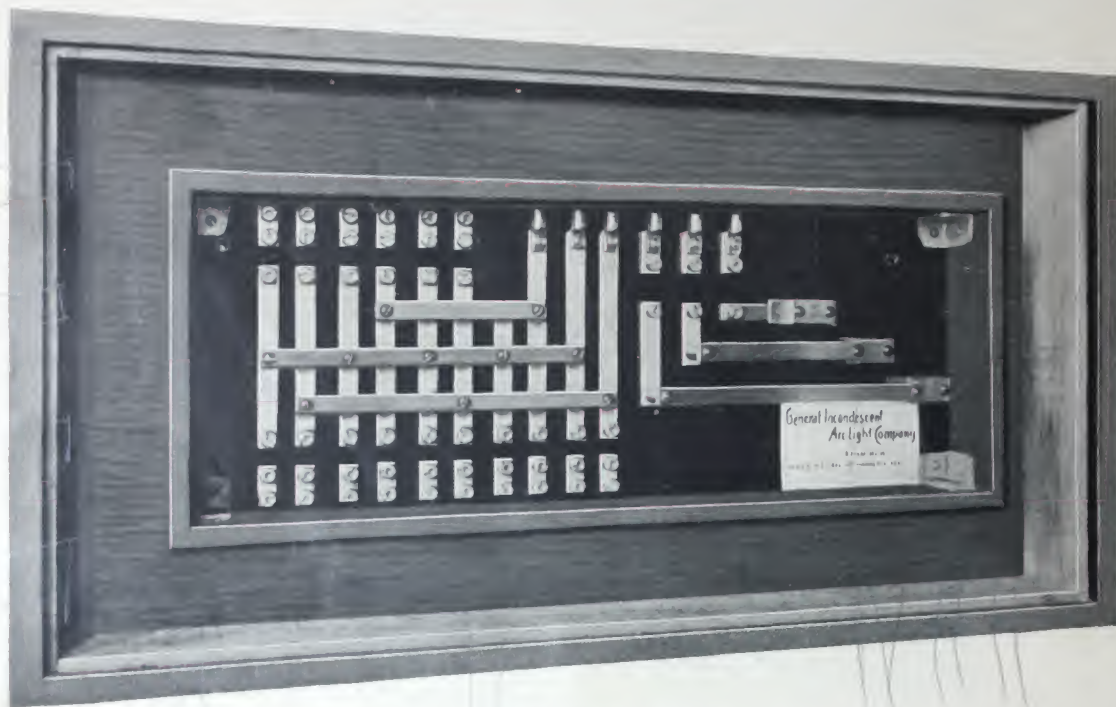
NUMBER OF BRANCH CIRCUITS	2	4	6	8	10	12	14	16
V 3 A Panel Board only	\$2.85	\$4.70	\$6.35	\$7.35	\$8.35	\$9.35	\$10.35	\$11.35
Slate Frame for same, viz.: 4 inner sides, top slate for door, and angle castings for V 3 A, ad- ditional	1.30	1.50	1.70	1.90	2.10	2.30	2.50	2.70
Cabinet Slate Lining for same, viz.: 4 outer sides, 4 bottom panels, and 4 covering panels for trim, additional	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80
V 2 A 10% less than V 3 A.								
V 3 S Panel Board only	4.20	7.40	10.40	12.75	15.10	17.45	19.80	22.15
Slate Frame for same, additional . .	1.45	1.65	1.85	2.05	2.25	2.45	2.65	2.85
Cabinet Slate Lining for same, ad- ditional	2.70	2.95	3.20	3.45	3.70	3.95	4.20	4.45
V 2 S 10% less than V 3 S.								

Above Prices are for Plain Finished Strips, Terminals, etc.
 For Polish Finished, add 10% to above prices
 Fuses are not included in any of above prices.

No. 911. 3 A M.
 " 913. 3 S M.
 " 915. 3 A.
 " 917. 3 S.

Panel Boards.

No. 912. 2 A M.
 " 914. 2 S M.
 " 916. 2 A.
 " 918. 2 S.



This Cut Illustrates Panel 3 A M, with 3 Wire Bus Bars, Meter Connections and 2 Wire Branch Circuits (for Link Fuses) adapted to 3/2 Wire System or Straight 3 Wire System.

Also made as Panel 2 A M for Straight 2 Wire System.

Panel 3 S M differs from 3 A M simply in the addition of a Double Pole Knife Switch on each Branch Circuit.

Panel 2 S M is similar to 3 S M, made for Straight 2 Wire System.

Panel 3 A differs from 3 A M in not having the Meter Connections.

Panel 3 S differs from 3 S M in not having the Meter Connections.

Panels 2 A and 2 S are similar to 3 A and 3 S respectively for 2 Wire System.

PRICES.

NUMBER OF BRANCH CIRCUITS.	2	4	6	8	10	12	14	16
3 A M Panel Board only	\$7.40	\$9.25	\$10.90	\$11.90	\$12.90	\$13.90	\$14.90	\$15.90
3 A Panel Board only	6.15	8.00	9.65	10.65	11.65	12.65	13.65	14.65
Slate Frame for either, additional	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00
Cabinet Slate Lining for either, "	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00
2 A M, 10 per cent. less than 3 A M.								
2 A, 10 per cent. less than 2 A M.								
3 S M Panel Board only	\$11.25	\$13.30	\$14.95	\$17.30	\$19.65	\$22.00	\$24.35	\$26.70
2 S Panel Board only	10.00	12.05	13.70	16.05	18.40	20.75	23.10	25.45
Slate Frame for either, additional	1.85	2.05	2.25	2.45	2.65	2.85	3.05	3.25
Cabinet Slate Lining for either, "	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40
2 S M, 10 per cent. less than 3 S M.								
2 S, 10 per cent. less than 3 S.								

Above Prices are for Plain Finished Strips, Terminals, etc.

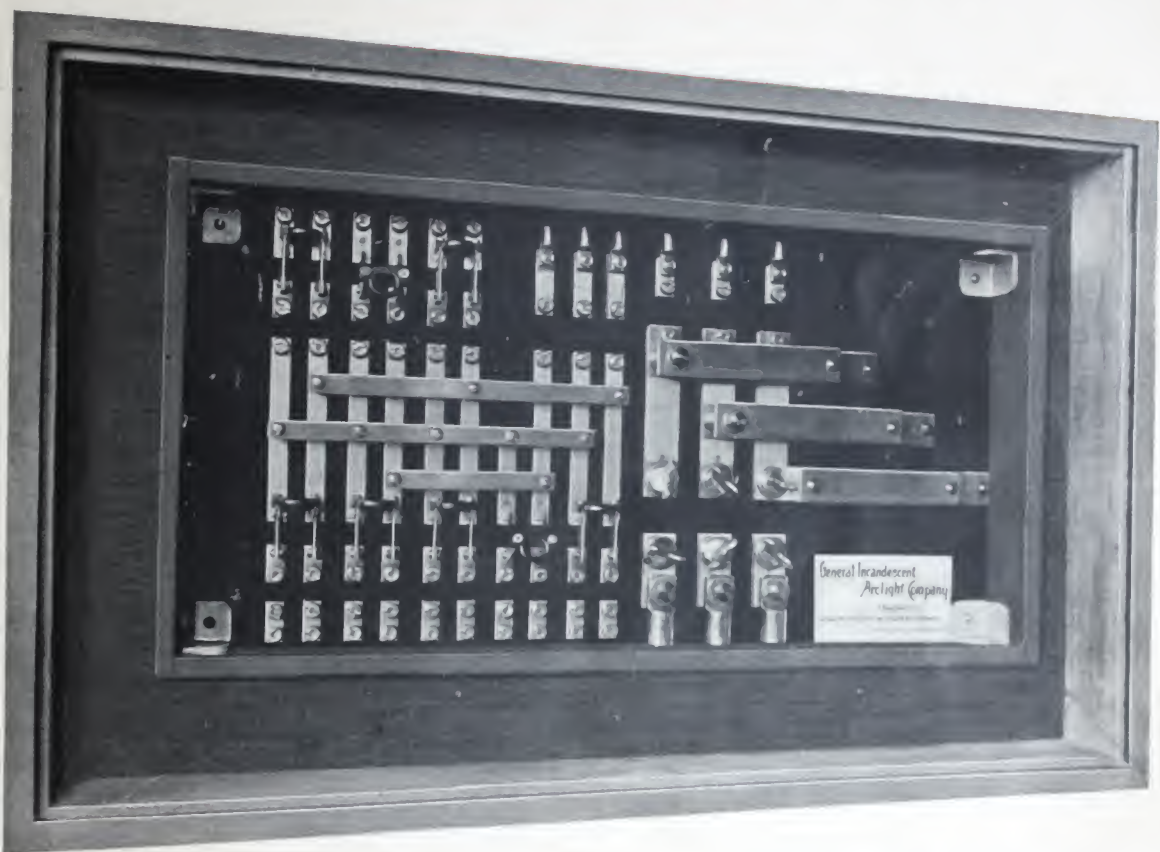
For Polish Finished, add 10 per cent. to above prices. Fuses are not included in any of above prices.

RICHARD GILPIN,
 Electrical Engineer,
 502-503 Philadelphia Bank Bldg.
 RICHARD GILPIN,
 Electrical Engineer,
 502-503 Philadelphia Bank Bldg.

No. 921. 3 S M F.
" 923. 3 A M F.

Panel Boards.

No. 922. 2 S M F.
" 924. 2 A M F.



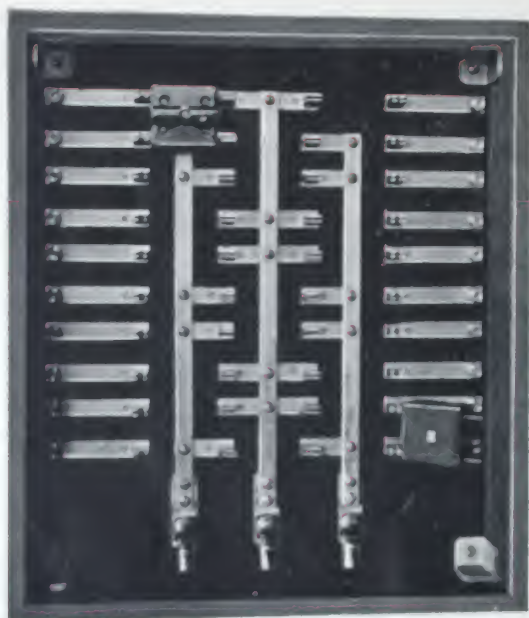
This Cut illustrates Panel 3 S M F with 3 wire Bus Bars, Meter Connections, Fusible Feeder Terminal Connections and 2 wire Branch Circuits, having a double Pole Knife Switch on each (for Link Fuses). Adapted to 3/2 wire system or straight 3 wire system. Also made as Panel 2 S M F for straight 2 wire system. Panel 3 A M differs from 3 S M F in not having the Switches on the Branch Circuits. Also made as Panel 2 A M F for straight 2 wire system.

PRICES.

NUMBER OF BRANCH CIRCUITS	2	4	6	8	10	12	14	16
3 S M F Panel Board only	\$14.35	\$17.55	\$20.55	\$22.90	\$25.25	\$27.60	\$29.95	\$32.30
Slate Frame for same, additional . .	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60
Cabinet Slate Lining for same, add'l .	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80
2 S M F 10% less than 3 S M F.								
3 A M F Panel Board only	\$13.00	\$14.85	\$16.50	\$17.50	\$18.50	\$19.50	\$20.50	\$21.50
Slate Frame for same, additional . .	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20
Cabinet Slate Lining for same, add'l .	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20
2 A M F 10% less than 3 A M F.								

Above Prices are for Plain Finished Strips, Terminals, etc.
For Polish Finished add 10% to above prices. Fuses are not included in above prices.

Panel Boards with Removable Fuse Holders.



This Cut Illustrates Panel V 3 R, which serves the same purpose as V 3 A and V 3 S illustrated on page 45, the difference being that the Removable Fuse Holder described on page 39 is applied to the Branch Circuits in place of the Knife Blade Switch or simple Fuse Link Terminals.

Panel V 2 R is in like manner the substitute for V 2 A and V 2 S. *Made for Straight 2 Wire System.

In like manner, the other Panel Boards previously illustrated have their equivalents with the Removable Fuse Holders as follows:

No. 931.	3 R M,	with Removable Fuse Holder	3 A M	and 3 S M,	see page 46.
" 932.	2 R M,	"	"	" 2 A M	" 2 S M, " 46.
" 933.	3 R,	"	"	" 3 A	" 3 S, " 46.
" 934.	2 R,	"	"	" 2 A	" 2 S, " 46.
" 937.	3 R M F,	"	"	" 3 A M F	" 3 S M F, " 47.
" 938.	2 R M F,	"	"	" 2 A M F	" 2 S M F, " 47.

PRICES.

NUMBER OF BRANCH CIRCUITS	2	4	6	8	10	12	14	16
V 3 R, Panel Board only	\$4.55	\$8.10	\$11.45	\$14.15	\$16.85	\$19.55	\$22.25	\$24.95
V 2 R, 10 per cent. less than V 3 R.								
3 R M, Panel Board only	11.60	14.00	16.00	18.70	21.40	24.10	26.80	29.50
2 R M, 10 per cent. less than 3 R M.								
3 R, Panel Board only	10.35	12.75	14.75	17.45	20.15	22.85	25.55	28.25
2 R, 10 per cent. less than 3 R.								
3 R M F, Panel Board only	14.75	18.25	21.50	24.50	27.50	30.50	33.50	36.50
2 R M F, 10 per cent. less than 3 R M F.								

For Prices of Slate Frames and Slate Linings, see pages 45-47 under corresponding Panel Board Prices.

Above Prices are for Plain Finished Strips, Terminals, etc.

For Polish Finished, add 10 per cent. to above prices. Fuses are not included in any of above prices.

Bergmann Conduit Outlet Boxes

THESE boxes, illustrated on this and succeeding pages are the product of our own experience with the practical requirements of Iron and Steel Armored Conduit work. They are made of fine cast iron, well finished and designed in as to require the least amount of labor for installing as well as for minimum original cost.

They have been installed in numerous buildings where the work is of the most modern and improved kind, and with the best results.

SPECIAL BOXES OF ANY DESIRED KIND MADE TO ORDER.

♦ ♦ ♦

Outlet Box for Receptacles or Flexible Pendants.



No. 701, Outlet Box.

Outside
Diameter
of Box :
Diameter,
4 inches :
Height,
1 1/2 inch.



No. 702, Cover for Receptacles.

No. 703, Cover for Flexible Pendants.

This box is designed to take the standard Edison Base Receptacle which is held clear of the bottom of the box on the raised portion shown in the cut, permitting the wire to pass under and enter the Receptacle from below it. The cover is held in place by the Screw Ring of the Receptacle.

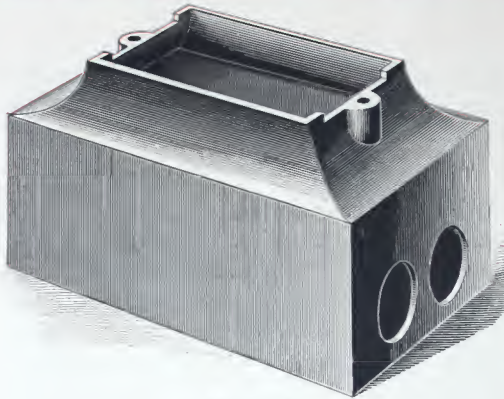
The same box can also be used for flexible Cord Pendants, for which purpose the cover is provided with a rubber bushing with hole of proper size for the flexible cord, and with two screw holes in the rim for its support. The cut will be used for this purpose are those known as Flatiron "Bug" Cut Outlets for which the box provides ample space.

PRICES.

No. 701. Outlet Box Heavily Improved Inside and Outside :	\$6.25
No. 702. Base Cover for same, with hole to fit Receptacle :	.37
No. 703. Base Cover for same, with Bushing for Flexible Pendants :	.45
No. 704. Flatiron Bugs, Single Poles, for No. 701, each :	.12

N. B.—Above Outlet Boxes are for Branch Circuits, taking Conduits up to 1 1/2 inch size. When ordering state number of side-holes for Conduits and size of Conduit.

Outlet Box for Flush Switches.



No. 706.

bends in the conduit. The two screw holes at the top are for fastening the Switch.

PRICES.

No. 706. Outlet Box, Heavily Japanned Inside and Outside, - \$0.30.

N.B.—Above Outlet Boxes are for Branch Circuits, taking Conduits up to $\frac{5}{8}$ inch size. When ordering state number of side-holes for Conduits and size of Conduit.

No. 706. OUTLET BOX.

Outside Dimensions.

5 in. long x 3 in. wide x $2\frac{7}{8}$ in. high.

Fits our Flush Switch (see page 40) or C. S. Flush Switch.

This Box is designed for either surface or concealed work. For surface work, the conduit holes are drilled close to the bottom of the box. For concealed work, the conduit holes are drilled within $\frac{3}{4}$ in. from the top, so as to allow the conduit to enter without the labor and expense of making

Special Outlet Box for Standard Edison Receptacles.

No. 707. OUTLET BOX.

Outside Dimensions.

Box $4\frac{1}{4}$ in. long, 5 in. wide, $1\frac{1}{4}$ in. deep. Receptacle part, $2\frac{1}{2}$ in. diameter, $\frac{7}{8}$ in. deep.

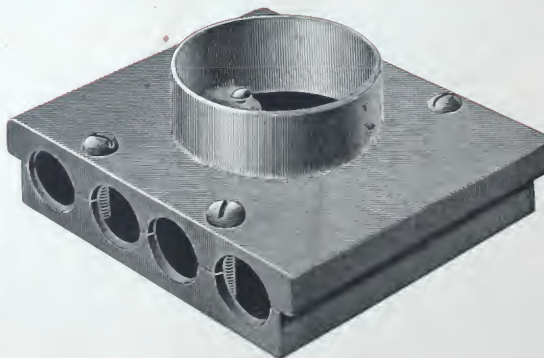
This Box is especially useful for decorative lighting in which generally several conduits are used, so that the lights may be taken off alternately. The bottom of the Box is first fastened into position; the conduits are cut to the proper length so as to extend into the Box a short distance, and then the cover of the Box is put on and serves to clamp and support the conduits. The particular circuit which is used is looped into the Receptacle and the others pass straight through.

PRICE.

No. 707. Outlet Box. Heavily Japanned Inside and Outside, - \$0.30.

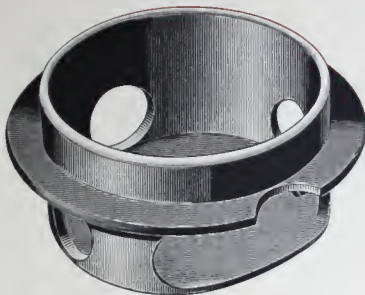
A Brass Cover, similar to No. 702, on page 49, is furnished for above, price, \$0.07.

N.B.—Above Outlet Boxes are for Branch Circuits, taking Conduits up to $\frac{5}{8}$ inch size. When ordering state number of side-holes for Conduit and size of Conduit.



No. 707.

Outlet Box for Walls.



No. 708. Outlet Box with flange.
No. 709. Same Box without flange.

OUTSIDE DIMENSIONS OF BOX.

Diameter, $3\frac{1}{2}$ in.
Flange, $4\frac{3}{8}$ in.
Depth, 2 in.



No. 711. Removable
Insulating Lining for same.

This box is designed for universal use on side outlets where both the gas and conduit pipes are brought to the same point. In such cases generally three pipes run up from the floor to the outlet in juxtaposition. Before the gas outlet elbow is screwed fast to the wall, the above outlet box is slipped on over the gas outlet elbow and the two conduit tubes and held in position by the two screws through the elbow. Conduits may enter the box from any direction and we furnish the box with all the holes for conduits shown in the cut. The holes not used are covered with the Removable Insulating Lining, No. 711, which also serves the purpose of interior insulation. The lining is furnished only with the cuttings shown on the cut if for stock use and the mechanic on the job makes any other cutting according to requirement. If the requirements are given to us, we will make further cuttings in same.

PRICES:

No. 708.	Outlet Box Heavily Japanned inside and outside	\$0.25
No. 709.	“ “ “ “	. 0.22
No. 711.	Insulating lining is included in above price.	

The flange of above box is put on $\frac{5}{8}$ inch from the top edge to accommodate it to plaster ceilings. It rests, when the box is placed in position on the lath (or surface on which the plaster is laid) and serves to level the box and make it flush with the finished ceiling.

N. B.—Above Outlet Boxes are for Branch Circuits, taking Conduits up to $\frac{5}{8}$ inch size. When ordering state number of side-holes desired and size of Conduit.

Outlet Box for Ceilings.

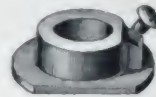


No. 712. Outlet Box.

Outside
Dimensions of
Box:
Diameter, $3\frac{1}{2}$ in.
Flange, $4\frac{1}{8}$ in.
Height, $1\frac{1}{8}$ in.



No. 713. Wing Nut for same.



No. 714. Simple Nut for same.

This box is designed so that it may be supported on Combination Gas and Electric Ceiling Outlets by means of the gas pipe outlet. The cut shows provision, by means of four holes in the bottom of the box, for entering the conduits in that way, but, if the conduits are to enter from the side, it may be ordered with the holes on the side. The wing nut, No. 713, is made of cast iron with three wings to cover the holes in the bottom that may not be used. One or two or all of these wings may be knocked off if more of the bottom holes are utilized. If all four holes are to be utilized, the simple nut, No. 714, should be ordered. The nuts hold the box in position by means of the set screw which is shown in the cuts.

PRICES.

No. 712.	Outlet Box, heavily Japanned, inside and outside -	\$0.20
No. 713.	Wing Nut, for same - - - - -	.05
No. 714.	Simple Nut for same - - - - -	.03

The flange of above box is put on $\frac{1}{8}$ inch from top edge to accommodate it to plaster work. It rests, when the box is placed in position, on the lath (or surface on which the plaster is laid), and serves to level the box and make it flush with the finished ceiling.

N. B.—Above Outlet Boxes are for Branch Circuits taking Conduits up to $\frac{3}{4}$ inch size. When ordering state size of side holes desired.

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Office and Works of General Incandescent Arc Light Company, 572 to 578 First Avenue, New York.